

# Service Manual

**PIONEER®**  
The future of sound and vision.



The photo shows the model KEH-8282TR.

**ORDER NO.**  
**CRT 1107**

**CASSETTE CAR STEREO WITH FM/AM ELECTRONIC TUNER**

# KEH-8282TR

**UC**

# KEH-6262TR

**UC**

See the Service manual CX-166 (CRT1094) when servicing the cassette mechanism assy.

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## 1. SPECIFICATIONS

### General

Power source .....	14.4 V DC (10.8 — 15.6 V allowable)
Grounding system .....	Negative type
Max. current consumption .....	5.3 A
Dimensions (chassis) .....	180(W) × 50(H) × 140(D) mm
	[7-1/8(W) × 2(H) × 5-1/2(D) in.]
(nose) .....	105(W) × 42(H) × 36(D) mm
	[4-1/8(W) × 1-5/8(H) × 1-3/8(D) in.]
Shaft interval .....	130 or 147 mm (5-1/8 or 5-3/4 in.)
Weight .....	1.5 kg (3.3 lbs.)

### Amplifier

Continuous power output is 11 W per channel min. into 4 ohms, both channels driven 50 to 15,000 Hz with no more than 5% THD.	
Maximum power output .....	25 W × 2/8.5 W × 4 (EIAJ)
Load impedance .....	4 Ω (4 — 8 Ω allowable)
Preout output level/Impedance .....	500 mV/1 kΩ
Tone controls (superbass) f <sub>0</sub> .....	80 Hz
level .....	+9 dB/+6 dB
(bass) .....	±10 dB (100 Hz)
(treble) .....	±10 dB (10 kHz)
Loudness contour .....	+3 dB (100 Hz) (volume: -30 dB)

### Tape player

Tape .....	Compact cassette tape (C-30 — C-90)
Tape speed .....	4.76 cm/sec. (+0.14 cm/sec., -0.05 cm/sec.)
Fast forward/rewind time .....	Approx. 100 sec. for C-60
Wow & flutter .....	0.13% (WRMS)
Frequency response (KEH-8282TR) .....	Metal: 50 — 17,000 Hz (±3 dB)
	Normal: 50 — 14,000 Hz (±3 dB)
(KEH-6262TR) .....	50 — 14,000 Hz (±3 dB)
Stereo separation .....	45 dB
Signal-to-noise ratio (KEH-8282TR)	
.....	Dolby NR IN: 60 dB (IHF-A network)
	Dolby NR OUT: 52 dB (IHF-A network)
(KEH-6262TR) .....	52 dB (IHF-A network)

### FM tuner

Frequency range .....	87.9 — 107.9 MHz
Usable sensitivity .....	12 dBf (1.1 μV/75 Ω, mono)
50 dB quieting sensitivity .....	17 dBf (1.9 μV/75 Ω, mono)
Signal-to-noise ratio .....	70 dB (IHF-A network)
Distortion .....	0.3% (at 65 dBf, 1 kHz, stereo)
Frequency response .....	50 — 15,000 Hz (±3 dB)
Stereo separation .....	40 dB (at 65 dBf, 1 kHz)
Selectivity .....	70 dB (2ACA)

### AM tuner

Frequency range .....	530 — 1,620 kHz
Usable sensitivity .....	18 μV (25 dB) (S/N: 20 dB)
Selectivity .....	50 dB (±10 kHz)

*These specifications were determined and are presented in accordance with specification standards established by the Ad Hoc Committee of Car Stereo Manufacturers.*

### Note:

Specifications and the design are subject to possible modification without notice due to improvements.

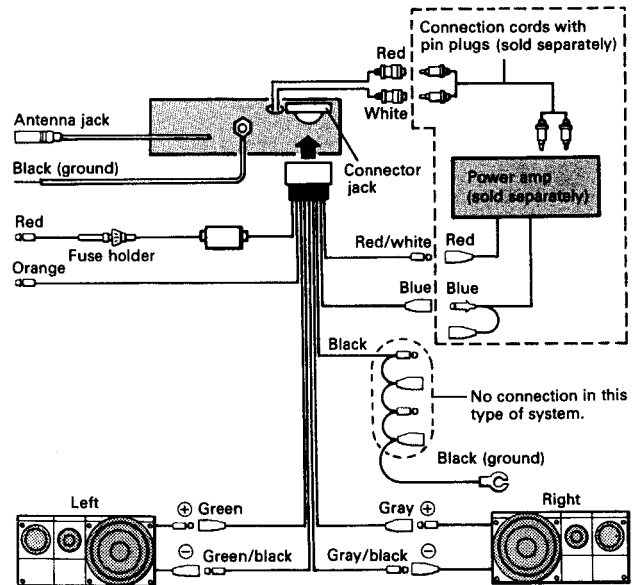
## 2. CONNECTIONS

### Note:

- Be aware that connection is different between 2-speaker system and 4-speaker system. Failure to follow the wiring diagram may cause considerable loss of power even when fader control is at the center position.
- To avoid shorts in the electrical system, be sure to disconnect the battery cable before beginning installation.
- Replace fuses only with the types stipulated on the fuse holder.
- Be sure to properly connect the color coded leads. Failure to do so can cause malfunctions.
- Cover unused terminals with tape to prevent electrical shorts.
- Refer to the power amp owner's manual when connecting a power amp (sold separately) to the pin jack.
- Since a unique BPTL circuit is employed, never wire so the speaker leads are directly grounded or the left and right speaker leads are common.
- When a blue lead (system control terminal) is present on the power amp, connect this lead to the unit's blue lead, and do not connect the unit's red/white lead to anything. When the power amp does not have a blue lead (system control terminal), connect the unit's red/white lead to the power amp red lead.

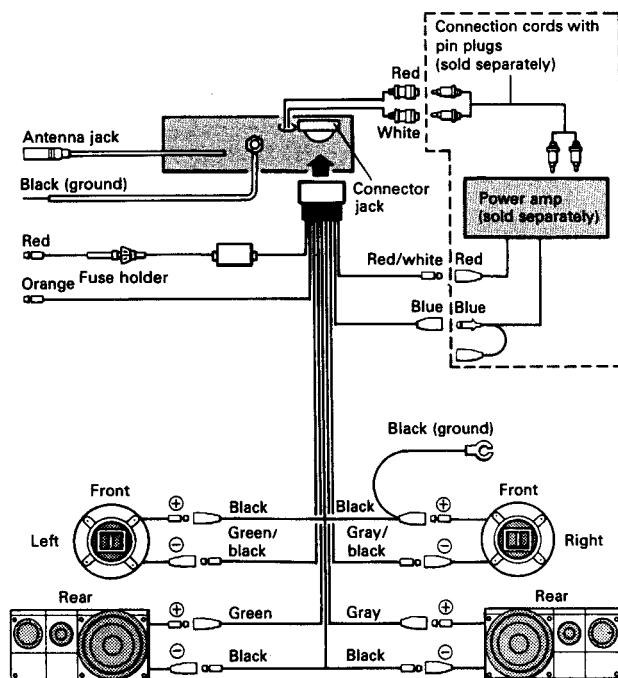
<b>Black (ground)</b>	To vehicle (metal) body.
<b>Red</b>	To electric terminal controlled by ignition switch (12 V DC) ON/OFF.
<b>Orange</b>	To terminal always supplied with power regardless of ignition switch position.
<b>Blue</b>	System control/Auto-antenna relay control terminal (Max. 300 mA 12 V DC).
<b>Red/White</b>	When the power amp (sold separately) does not have a blue lead (system control terminal), connect the unit's red/white lead to the power amp red lead.

### 2-speaker high-power system

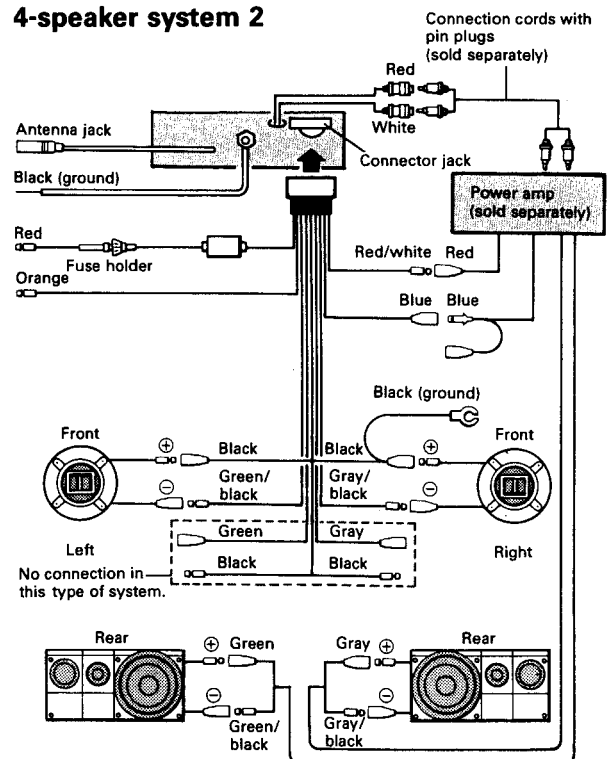


- Set the front/rear blend control to the left horizontal position for a 2-speaker high-power system. The front/rear blend control does not operate correctly when a power amp (sold separately) is connected to this system.

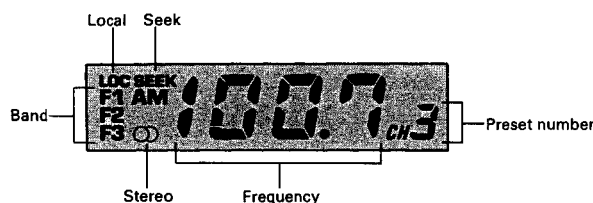
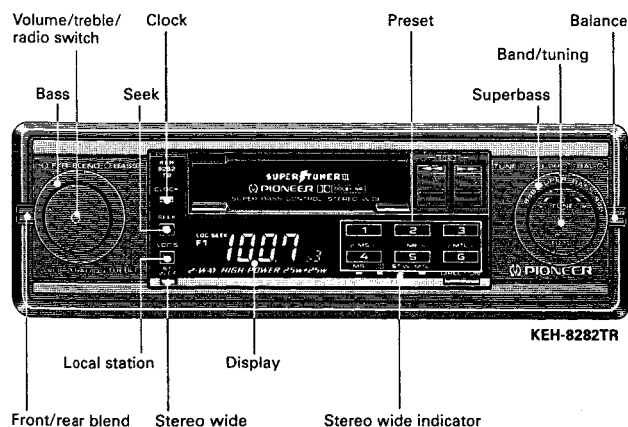
### 4-speaker system 1



### 4-speaker system 2



### 3. USING THE RADIO



#### ● Before attempting operation...

- Reduce the volume by turning the volume control knob to the left.
- Set the front/rear blend control to the left horizontal.

  1. Press the radio switch to turn on power and display the frequency.
  2. Press the band switch to select the band.
  3. Press the seek button and the seek tuning indicator will be displayed.
  4. Turn the tuning knob to the left or right to tune in the desired frequency. (Turning to the right will increase the frequency.)
  5. Adjust the volume and balance.
  6. Adjust the tone. To adjust the treble, first pull the knob until a click is heard. After setting to the desired level, push the knob in again to its original position.

#### ● To enter a frequency into the preset memory...

7. Hold down one of the preset buttons (1 — 6) for approximately two seconds. The frequency is stored in memory (assigned to the preset button pressed) once the preset number stops flashing on the display.
- Six FM1 frequencies, six FM2 frequencies, six FM3 frequencies and six AM frequencies can be entered.

#### ● Local Station Switch

Pressing this switch lowers the seek tuning reception sensitivity so that only stronger signals can be tuned in. This feature is convenient when driving through areas that have numerous radio stations. When this switch is depressed, the local indicator will be illuminated on the display.

#### ● Front/Rear Blend Control

This control is used to adjust the balance between the front and rear speakers when using a 4-speaker system. Rotating upwards progressively reduces mid and high frequencies from the rear speaker, while rotating downwards progressively reduces front speaker volume until, finally, sound is only being produced from the rear speaker. This control should be set to a horizontal position with a 2-speaker system.

##### Important

- Rotating the front/rear blend control upwards outs the mid and high frequencies from the rear speaker without change in low frequency. This is because front speaker diameter is smaller than that of the rear speaker, making it unsuitable for reproduction of low frequency sound. Therefore, undampened low frequencies are output from the rear speaker when the front/rear blend control is rotated to the front setting, enhancing front speaker low frequency.
- The front/rear blend control does not operate properly when a power amp (sold separately) is connected to a 2-speaker high-power system, for a 4-speaker effect.

#### ● Stereo Wide Switch

This switch is operational for FM stereo broadcast reception or when playing a prerecorded stereo tape. A press of this switch produces wide left/right stereo effect even in a small vehicle interior.

This switch should be set to OFF during reception of an FM monaural broadcast or when playing a prerecorded monaural tape.

#### ● Superbass Control

This knob is used to compensate very low frequencies (around 80Hz) which are susceptible to masking by road noise and engine noise. In the center position, this function is OFF, while rotating to the right boosts output by 9 dB and rotating to the left boosts output by 6 dB.

Boosting of the low frequencies may not be discernible even when the superbass control is adjusted if the program source does not contain frequency component in the vicinity of 80 Hz or when the small diameter speakers are being used.

#### ● Auto-Loudness

When playing back a tape or listening to the radio at low volume, the low tone is automatically emphasized.

#### ● Clock Switch

Each press causes the display to switch between clock and frequency.

#### Seek Tuning

Press the seek button, and tuning to the next higher or lower broadcast on the band can be accomplished automatically by simply turning the tuning knob to the left or right. FM frequencies change in 0.2 MHz steps while those in the AM band change in 10 kHz steps.

#### Preset Tuning

Pressing the preset button instantly tunes in the frequency programmed in the memory for that button.

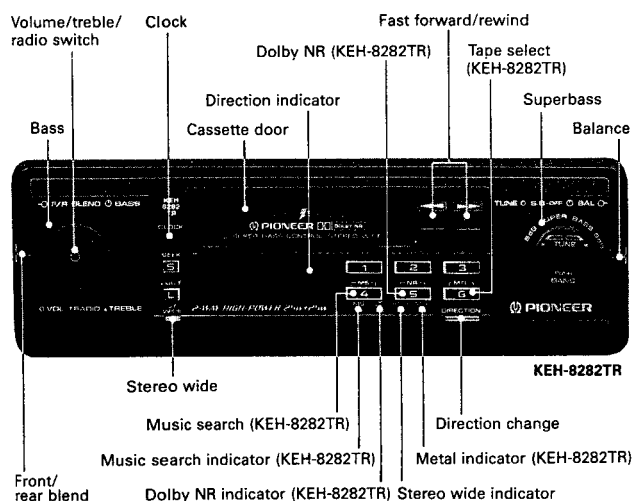
#### Manual Tuning

When manual tuning is employed, FM frequencies change in 0.2 MHz steps while AM frequencies change in 10 kHz steps.

1. Press the seek button and the seek tuning indicator will disappear from the display.
2. Change the frequency by turning the tuning knob to the left or right. Turning the knob once will change the frequency one step (see above). Holding the tuning knob in either direction will successively change the frequency at the prescribed step.



## 4. USING THE TAPE DECK



### • Before attempting operation...

- Reduce the volume by turning the volume control knob to the left.
- Set the front/rear blend control to the left horizontal.
- 1. Insert a tape into the deck to turn the power on and automatically begin playback. Even if the radio is on, the unit will automatically switch to and begin tape playback.
- 2. Adjust the volume and balance.
- 3. Adjust the tone. To adjust the treble, first pull the knob until a click is heard. After setting to the desired level, push the knob in again to its original position.
- 4. When tape playback reaches the end of the tape, playback will automatically switch from the side being played to the opposite side (ie. Side A to Side B or vice versa) (Auto-reverse). To eject the tape during playback, simultaneously press the fast forward and rewind buttons.
- Do not try to eject the cassette immediately after insertion, as it will cause malfunction. Wait a few seconds.

### KEH-6262TR

- Be sure to eject the tape when the vehicle's ignition is turned OFF. Leaving the tape in the unit can deform the pinch roller causing wow and flutter during tape playback.

### • Fast Forward/Rewind

Since the transport can be in either direction, both the left and right high-speed tape transport buttons can be regarded as fast forward/rewind buttons.

For fast forward, press the high-speed tape transport button that corresponds to the direction that is shown by the direction indicator. When the end of the tape is reached, playback will automatically begin from the opposite side of the tape (Auto-reverse).

For rewind, press the button that is opposite that of the direction shown by the direction indicator. When the end of the tape is reached, playback will automatically begin from the beginning of the same side of the tape (Auto-replay).

Fast forward and rewind can be terminated by pressing the respective opposite high-speed tape transport button.

### • Direction Change Button

This button is used to switch from one side of the tape to the other (from Side A to Side B or vice versa).

### • Tape Select Switch (KEH-8282TR)

This switch is used to switch to the proper mode for the tape being used and should be depressed when using chrome or metal tapes.

### • Dolby NR Switch (KEH-8282TR)

Press when playing a tape recorded with Dolby NR.

## Music Search (KEH-8282TR)

### • Returning to the beginning of selection A

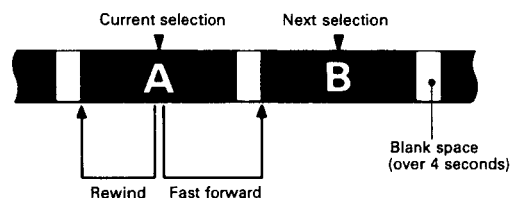
Press the music search button and then the high-speed tape transport button for the direction opposite that shown by the direction indicator. Playback will automatically start from the beginning of selection A.

### • Moving from selection A to selection B

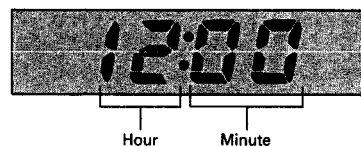
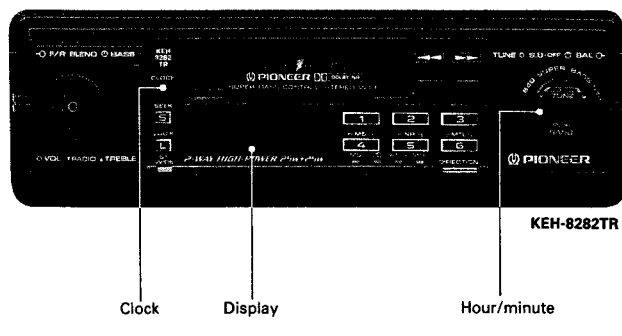
Press the music search button and then the high-speed tape transport button that corresponds to the direction shown by the direction indicator. Playback will automatically start from the beginning of selection B.

To enable regular fast forward/rewind operations, press the music search button again to turn the function OFF. The following errors will cause the music search function to operate improperly, even though the unit is not malfunctioning.

- Unrecorded "blank" portions between selections is less than 4 seconds → the blank portion cannot be detected by the unit.
- Pauses in recorded conversations are longer than 4 seconds → the unit reads these as blanks between selections.
- Portions are recorded at very low volume for more than 4 seconds → the unit reads these as blanks between selections.



## 5. SETTING THE TIME



1. Press the clock switch to switch to the time display.
2. Each turn of the hour/minute control knob to the left while the clock button is depressed advances the hour setting one hour, while each turn to the right advances the minute setting one minute. Holding the control knob in either position results in high speed advance of the respective setting.

## 6. DISASSEMBLY

### ● Removing the Case Assy

1. Remove the two screws A and two screws B.
2. Remove the case assy.

### ● Removing the Grille Assy (Fig. 1)

1. Remove the two screws C, and then remove the grille assy.

### ● Removing the Cassette Mechanism Assy

1. Disconnect the two connectors.
2. Remove the four screws, and then remove the cassette mechanism assy.

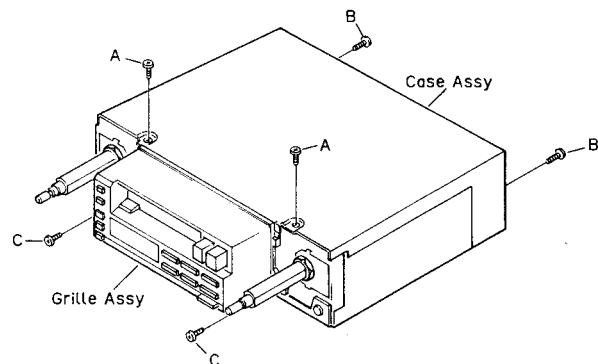


Fig. 1

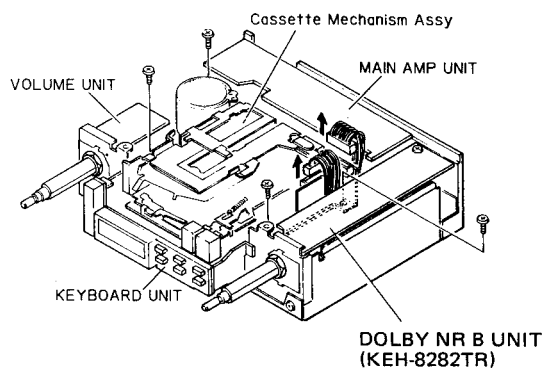


Fig. 2

● **Removing the Main Amp Unit**

1. Remove the one screw D and two screws E.
2. Disconnect the connector. (Fig. 3)
3. Disconnect the two connectors. (Fig. 4)
4. Remove the main amp unit.
5. Remove the four screws F, and then remove the heat sink.

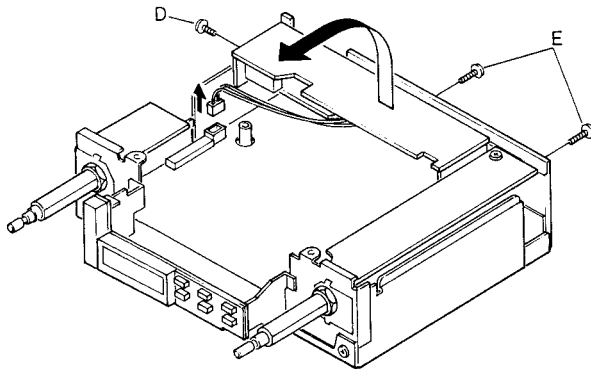


Fig. 3

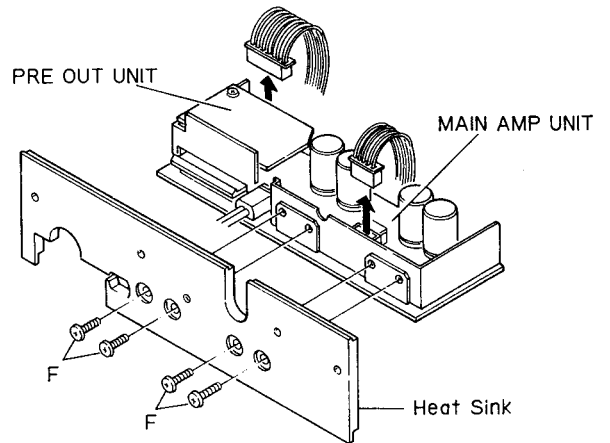


Fig. 4

● **Removing the Tuner Unit**

1. Remove the two screws, and then lift up the tuner unit.

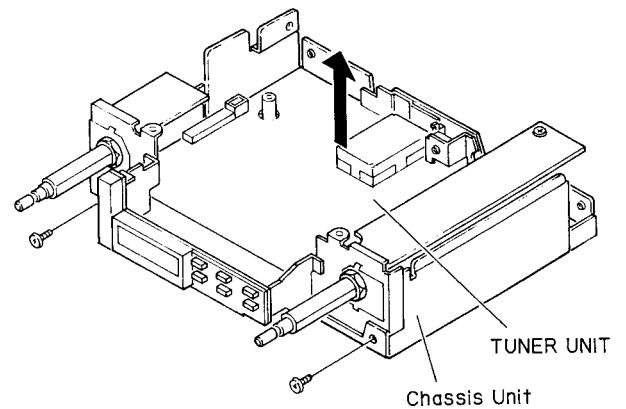


Fig. 5

7. ADJUSTMENT

• Connection Diagram

**NOTICE:**  
Select C1 so that total capacity of 80 pF is attained from the direction of the receiver jack.  
Z: Output impedance of SSG.

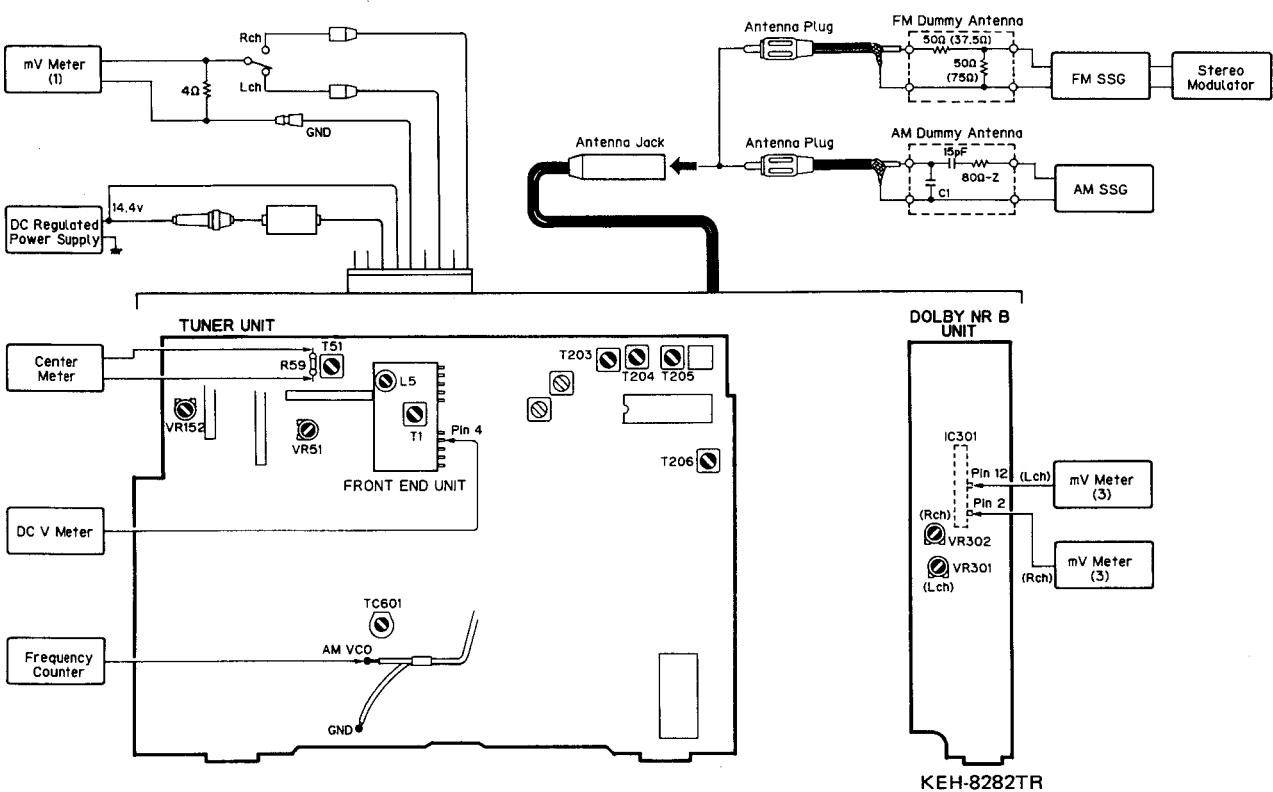


Fig. 6

7.1 AM ADJUSTMENT

	No.	AM SSG (400 Hz, 30%)		Displayed Frequency (kHz)	Adjusting Point	Adjustment Method (Switch Position)
		Frequency (kHz)	Level (dB)			
Tuning Volt	1			1,620	T203	DC V Meter: Less than 6 V
	2			530	T203	DC V Meter: More than 3 V
IF	1	1,000	20-25	1,000	T204,205,T206	mV Meter (1): Maximum

## 7.2 FM ADJUSTMENT

\*Stereo MOD.: 1kHz, L+R=90%, Pilot=10%

	No.	FM SSG		Displayed Frequency (MHz)	Adjusting Point	Adjustment Method (Switch Position)
		Frequency (MHz)	Level (dB)			
IF	1	98.1 (400 Hz, 30%)	60	98.1	T51	Center Meter: 0 (MONO SW: MONO)
Front End	1			107.9	L5	DC V Meter: $6.48 \pm 0.2$ V
	2			87.9	—	DC V Meter: $2.28 \pm 0.6$ V
	3	98.1 (400 Hz, 100%)	5-10	98.1	T1	mV Meter (1): Maximum
ARC	1	98.1*		98.1	VR152	mV Meter (1): Separation 5 dB
SEEK	1	98.1 (400 Hz, 100%)	20		VR51	Make SEEK stop (LOC.S SW: DX)
	2	98.1 (400 Hz, 100%)	19		—	Verify that SEEK doesn't stop.
	3	98.1 (400 Hz, 100%)	41		—	Verify that SEEK doesn't stop. (LOC.S SW: LOC.S)
	4	98.1 (400 Hz, 100%)	52		—	Verify that SEEK stops.
	5	Confirm each stop sensitivity falls within standard values after above adjustment.				

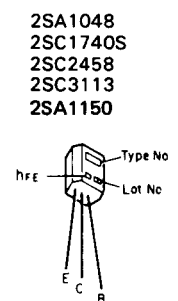
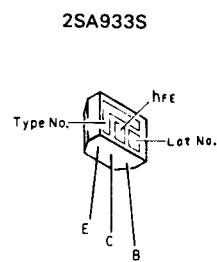
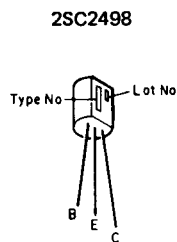
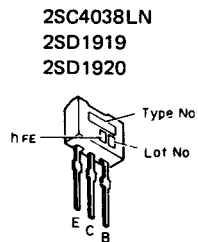
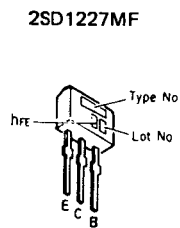
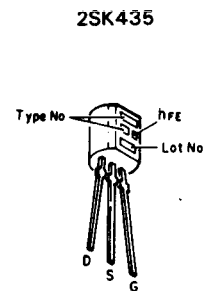
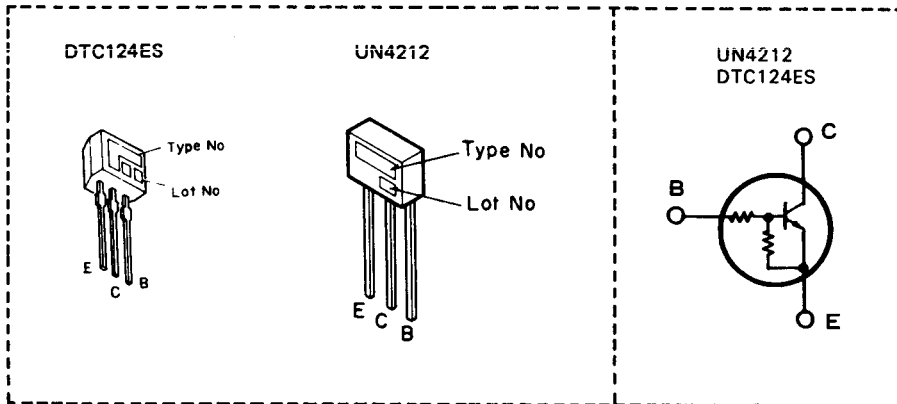
## 7.3 CLOCK ADJUSTMENT

NO.	AM Mode	Displayed Frequency (kHz)	Adjusting Point	Adjustment Method (Switch Position)
1		900	TC601	Frequency Counter: $11.61 \text{ MHz} \pm 200 \text{ Hz}$

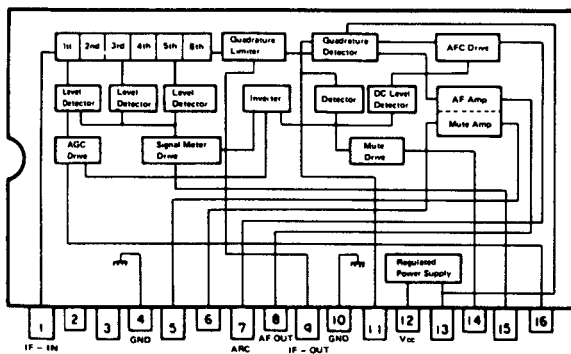
## 7.4 DOLBY NR LEVEL ADJUSTMENT (KEH-8282TR)

NO.	Cassette Tape	Adjusting Point	Adjustment Method (Switch Position)
1	NCT-150 (400 Hz, 200 nwb/m)	VR301 (L ch) VR302 (R ch)	mV Meter (3): 100 mV ( $-17.8 \text{ dBs}$ ) (Dolby NR SW: OFF, METAL SW: OFF)

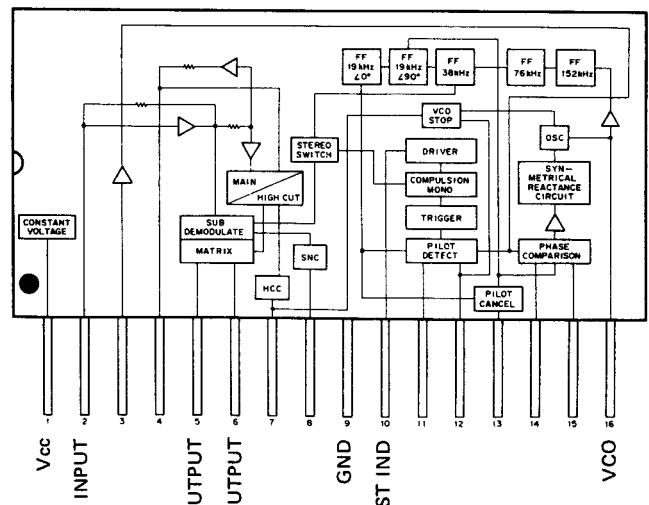
• ICs and Transistors



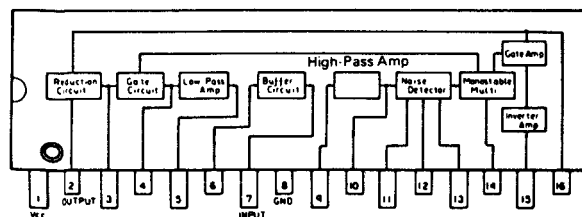
LA1140B



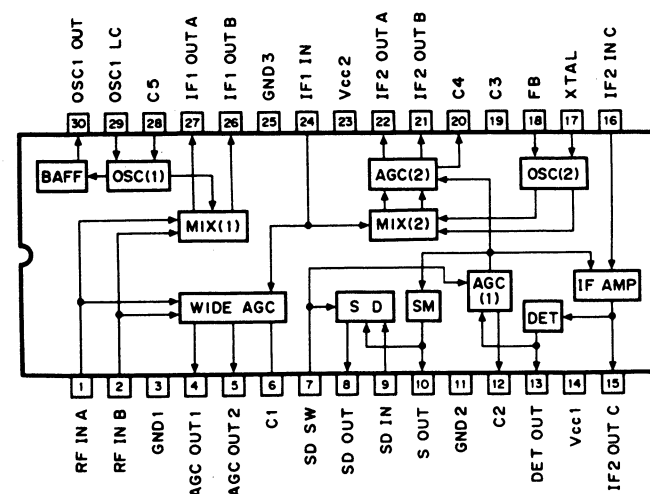
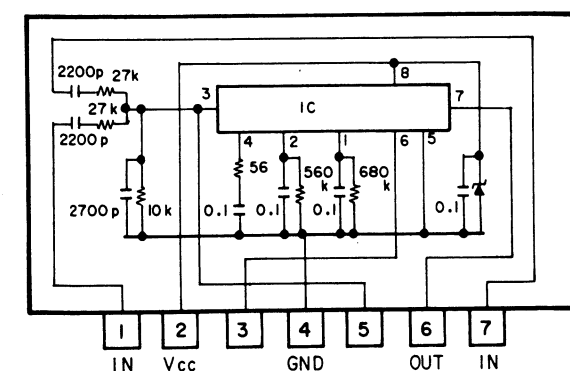
LA3430P



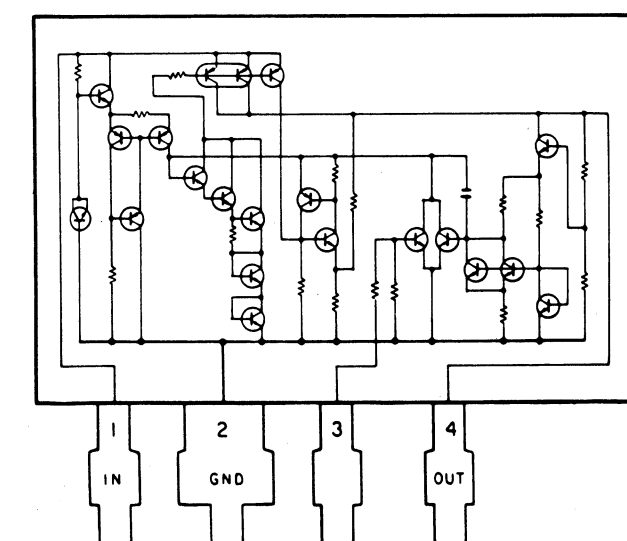
LA2110



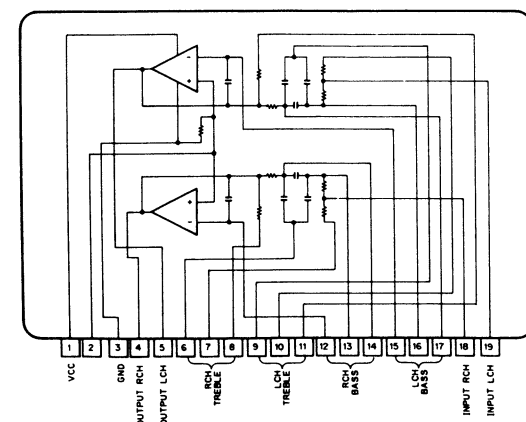
PA4010

CWW1053  
(KHD501)

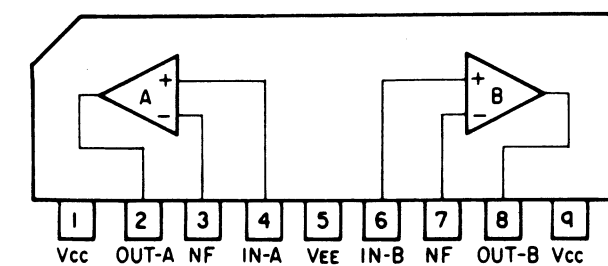
AN6540



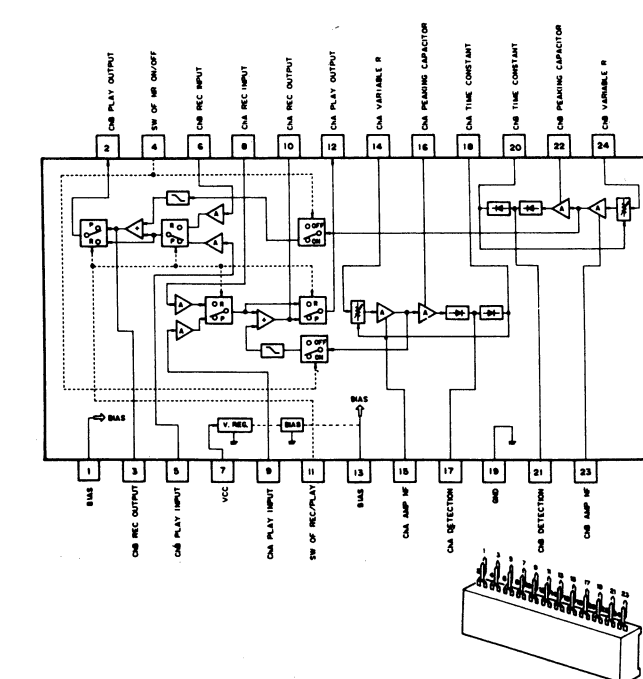
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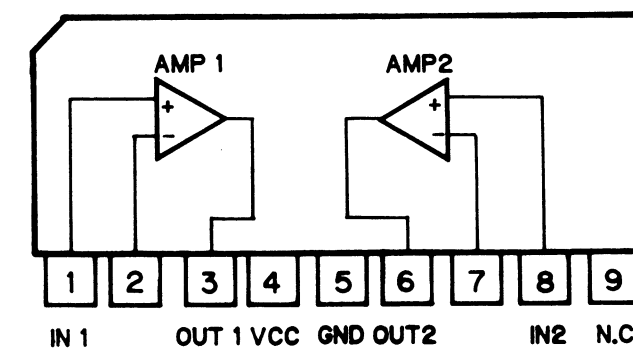
NJM2068S



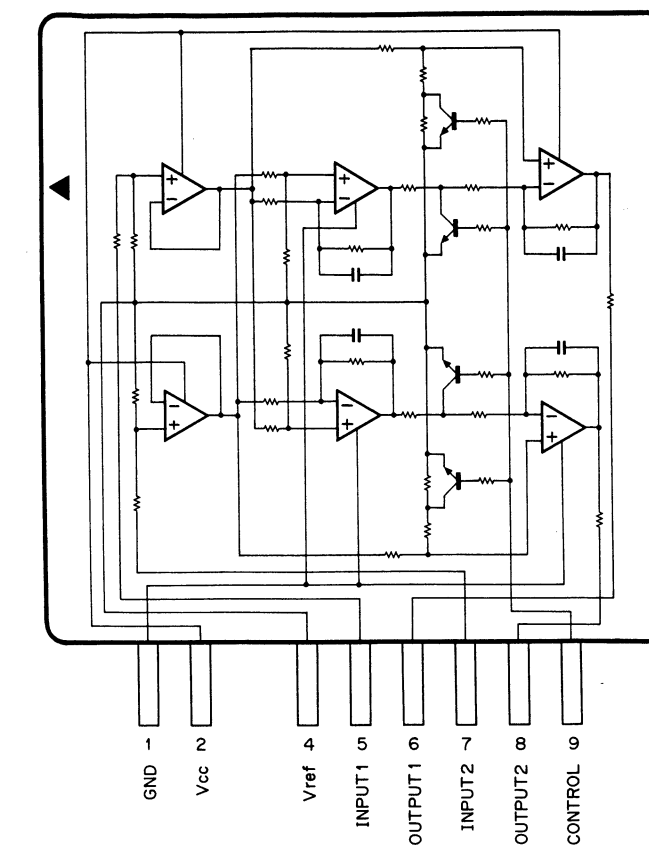
BA1104LS



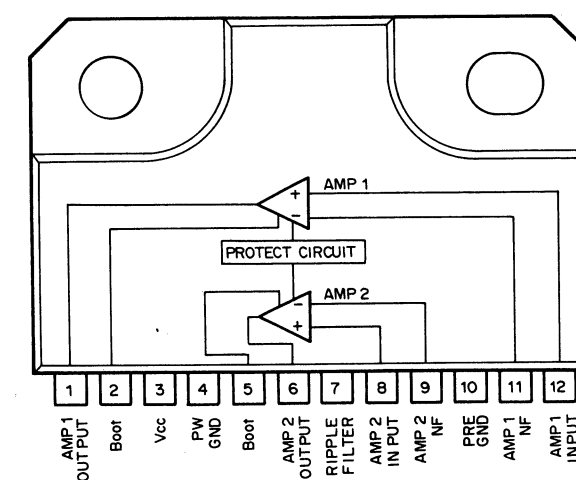
TA7375P



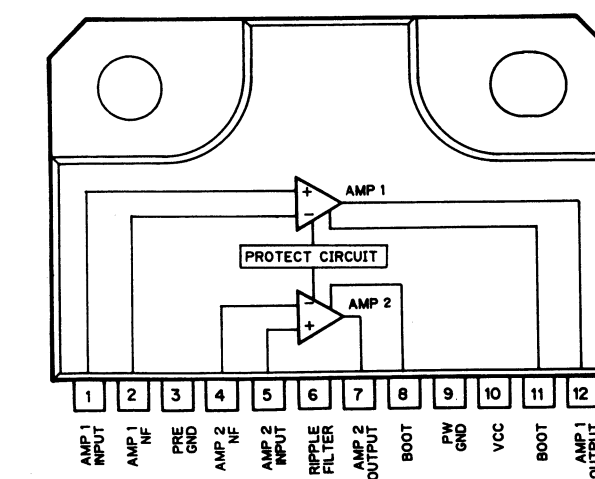
KHA136



TA7281P

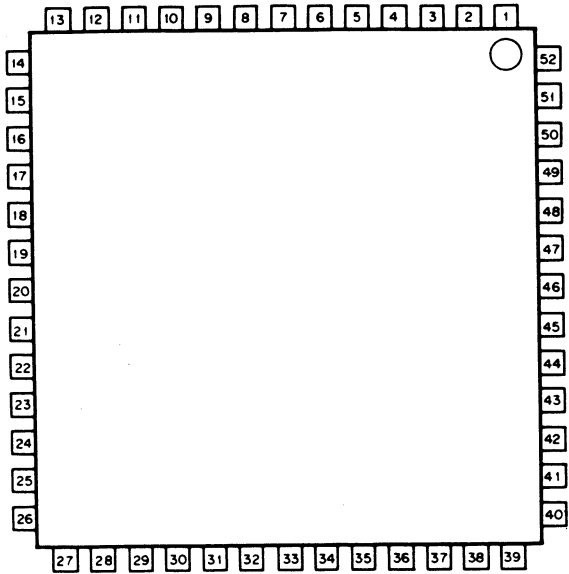


TA7280P



\*PD4113A

IC's marked by \* are MOS type.  
Be careful in handling them because they are very  
liable to be damaged by electrostatic induction.



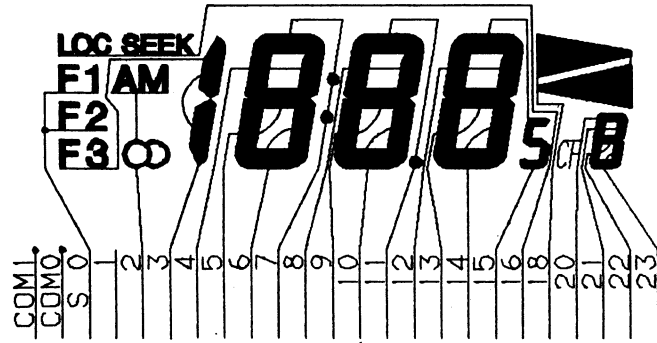
●Pin Function (PD4113A)

Pin No.	Pin Name	I/O	Function and Operation
1   4	LCD5   LCD2	Output CMOS Push-pull	Segment signal output terminal to LCD. LCD display performed using COM0, COM1 matrices.
5   6	COM0 COM1	Output CMOS Push-pull	Common signal terminal to LCD.
7   33	VDD VDD	—	Device power supply terminal. 5V voltage supplied.
8	FM	Input	Inputs local oscillator reference frequency (VCO output). This terminal is active when swallow counter method is selected.
9	AM	Input	Inputs local oscillator reference frequency (VCO output). This terminal is active when direct division system is selected.
10	GND	—	GND terminal.
11   12	E01 E02	Output CMOS 3 state	PLL error output. This output is applied to a varactor diode via an external low pass filter. E01 is not used.
13	CE	Input	Device signal input. H level during normal device operation, L level when device is not being used. PLL is in disable status while this terminal is L level. Change of CE terminal from L to H results in device reset and program to start from address 0.
14	NC	—	No connected to internal chips.
15   16	XI XO	Input CMOS	Quartz oscillator terminal. 4.5MHz quartz crystal used.
17	FM (MTL)	Output CMOS Push-pull	FM/AM selector output and equalizer switching output terminal. When the tuner operating H level: FM band L level: AM band When the tape operating H level: MTL (Metal) L level: Normal
18	LOC (MS)	Output CMOS Push-pull	LOC/DX selector output and MS ON/OFF selector output terminal. When the tuner operating H level: LOC mode L level: DX mode When the tape operating H level: MS ON mode L level: MS OFF mode

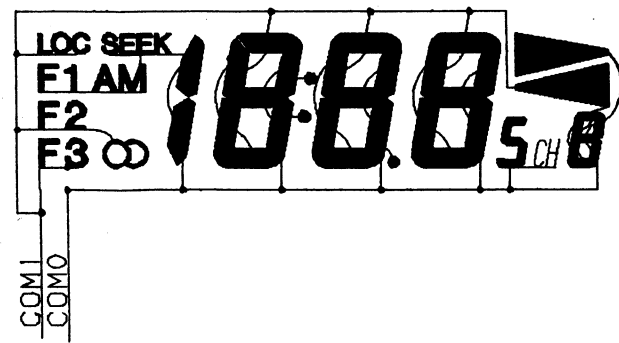
Pin No.	Pin Name	I/O	Function and Operation
19	FWD/REV	Output CMOS Push-pull	FWD/REV selector output terminal. L level is output in forward direction.
20	STB5	Output CMOS Push-pull	Strobe signal output terminal for diode matrix.
21   24	K3   K0	Input	Key matrix input terminal.
25   28	STB4   STB1	Output CMOS Push-pull	Strobe signal output terminal for key matrix.
29	DOLBY NR ON/OFF	Output CMOS Push-pull	Dolby NR ON/OFF control output terminal. L level is output when Dolby NR is ON.
30	DOLBY NR B/C	Output CMOS Push-pull	Dolby NR B/C control output terminal. L level is output when Dolby NR is B type.
31	MUTE	Output CMOS Push-pull	Mute ON/OFF control output terminal. Active low.
32	FM IF IN	Input	Judges whether or not a broadcast is present during auto tuning. A broadcast is judged as being present when H level is input.
34	AM IF IN	Input	AM IF pulse input terminal. Used for broadcast detection in AM band auto tuning.
35	LCD GND	—	LCD GND terminal.
36   40   41   52	LCD23   LCD 19 LCD 17   LCD6	Output CMOS Push-pull	Segment signal output terminal to LCD. LCD display performed using COM0, COM1 matrices.

LCD:CWW1055

SEGMENT



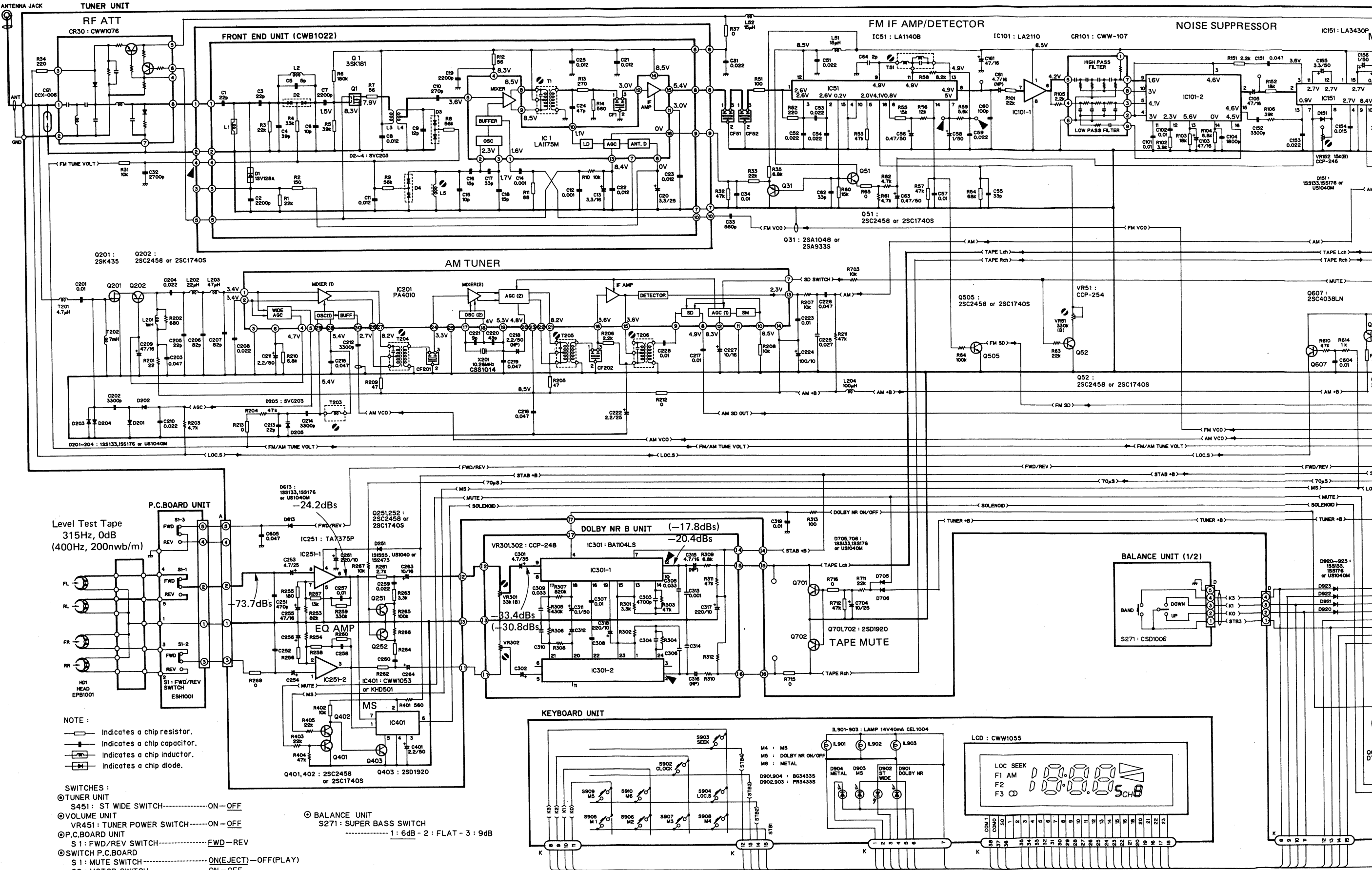
COMMON





8. SCHEMATIC CIRCUIT DIAGRAM (KEH-8282TR)

A  
B  
C  
D



NOTE:  
— Indicates a chip resistor.  
— Indicates a chip capacitor.  
— Indicates a chip inductor.  
— Indicates a chip diode.

SWITCHES:  
① TUNER UNIT  
S451: ST WIDE SWITCH-----ON-OFF  
② VOLUME UNIT  
VR451: TUNER POWER SWITCH-----ON-OFF  
③ P.C. BOARD UNIT  
S1: FWD/REV SWITCH-----FWD-REV  
④ SWITCH P.C. BOARD  
S1: MUTE SWITCH-----ON(EJECT)-OFF(PLAY)  
S2: MOTOR SWITCH-----ON-OFF  
S3: TAPE/TUNER SWITCH-----TAPE-TUNER  
The underlined indicates the switch position.

⑤ BALANCE UNIT  
S271: SUPER BASS SWITCH  
-----1: 6dB - 2: FLAT - 3: 9dB



□



2

3

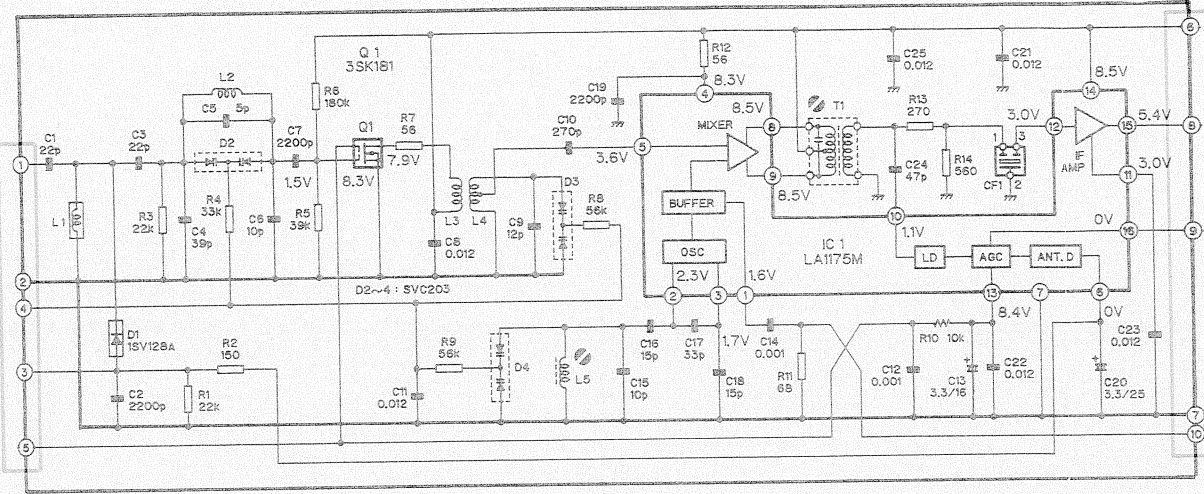
4

5

6

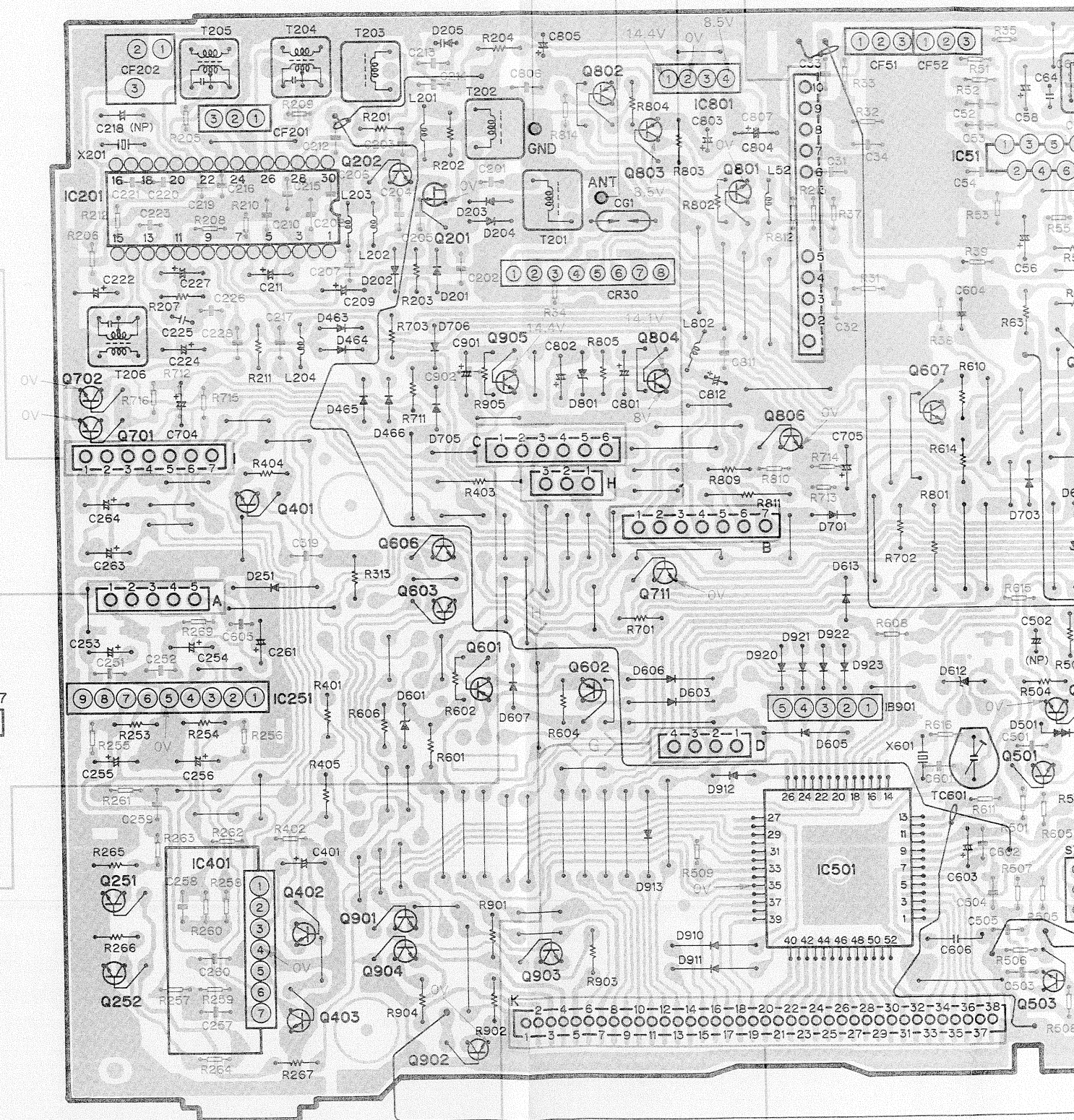
# AGRAM (KEH-8282TR)

## FRONT END UNIT (CWB1022)

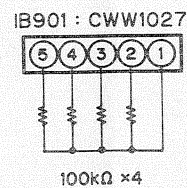
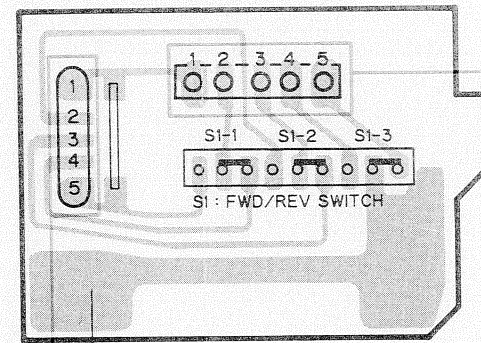


## TUNER UNIT

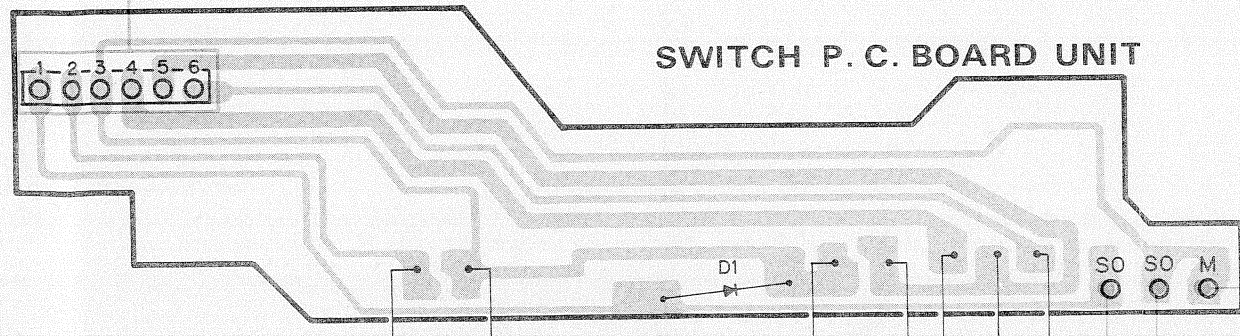
Q201												Q803						Q502	
Q702 Q251		IC201	Q401	Q402	Q202	Q901	Q606	Q601	Q905	Q802	Q804	IC801							
IC,Q	Q701 Q252	IC251	IC401	Q403	Q904		Q603	Q902	Q903	Q602	Q711	Q801	Q806	IC501	Q607	Q501 Q503			
ADJ	T206		T205		T204		T203						TC601		1				



## P. C. BOARD UNIT



## SWITCH P. C. BOARD UNIT



IC51

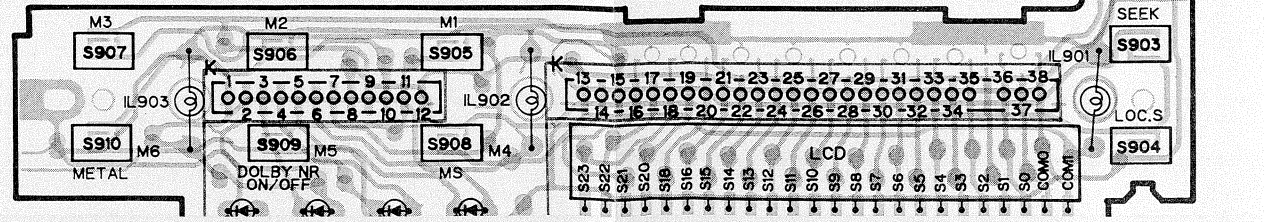
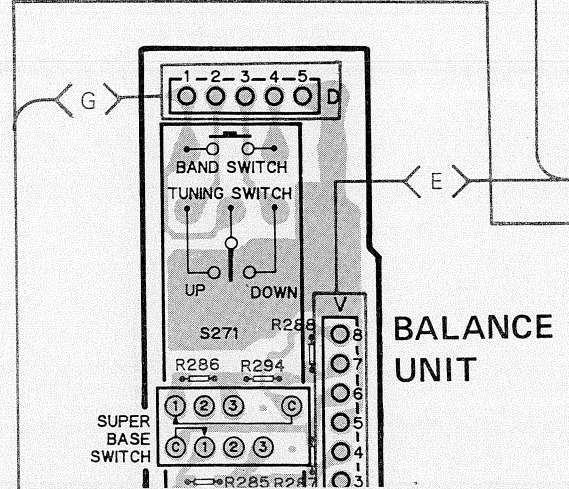
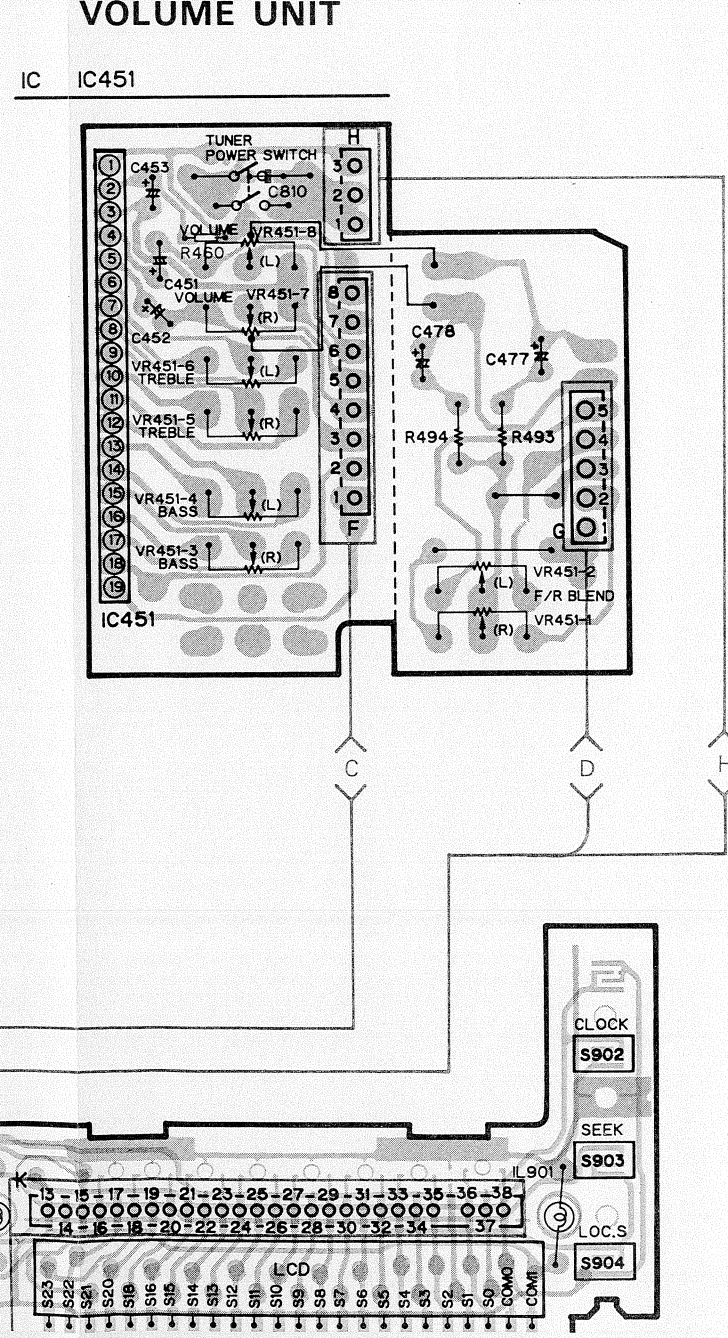
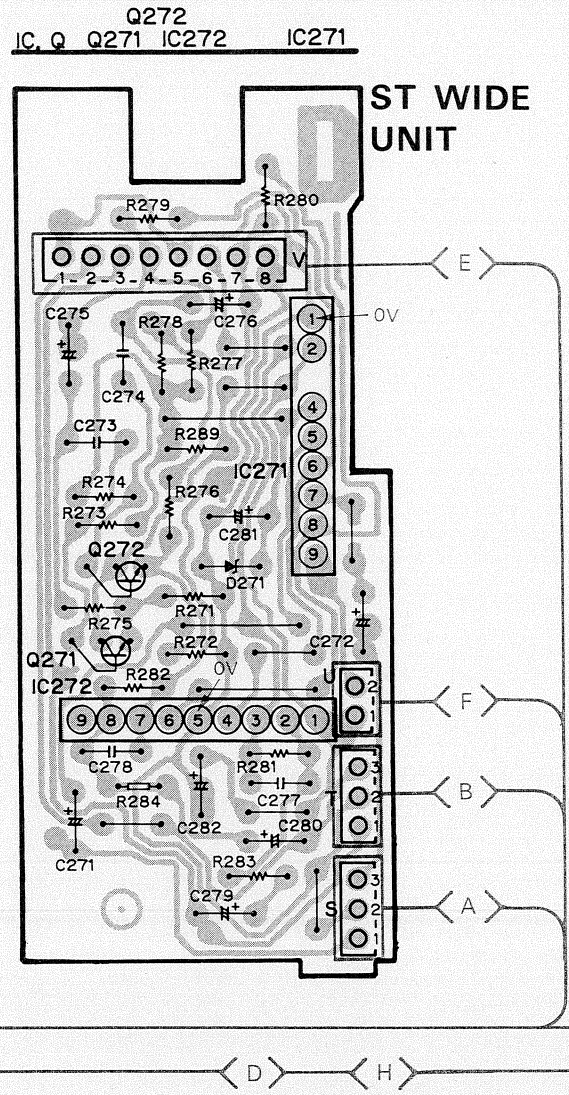
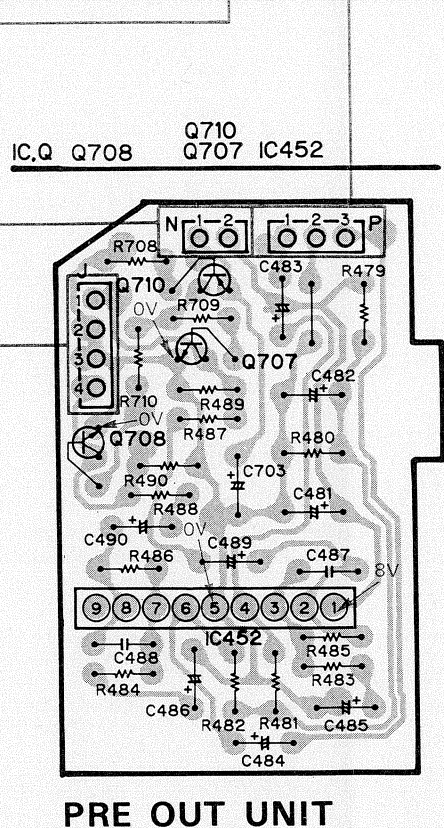
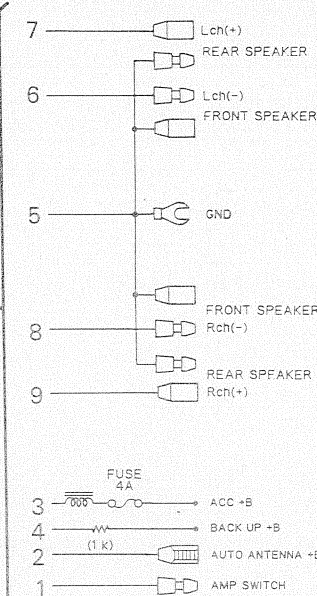
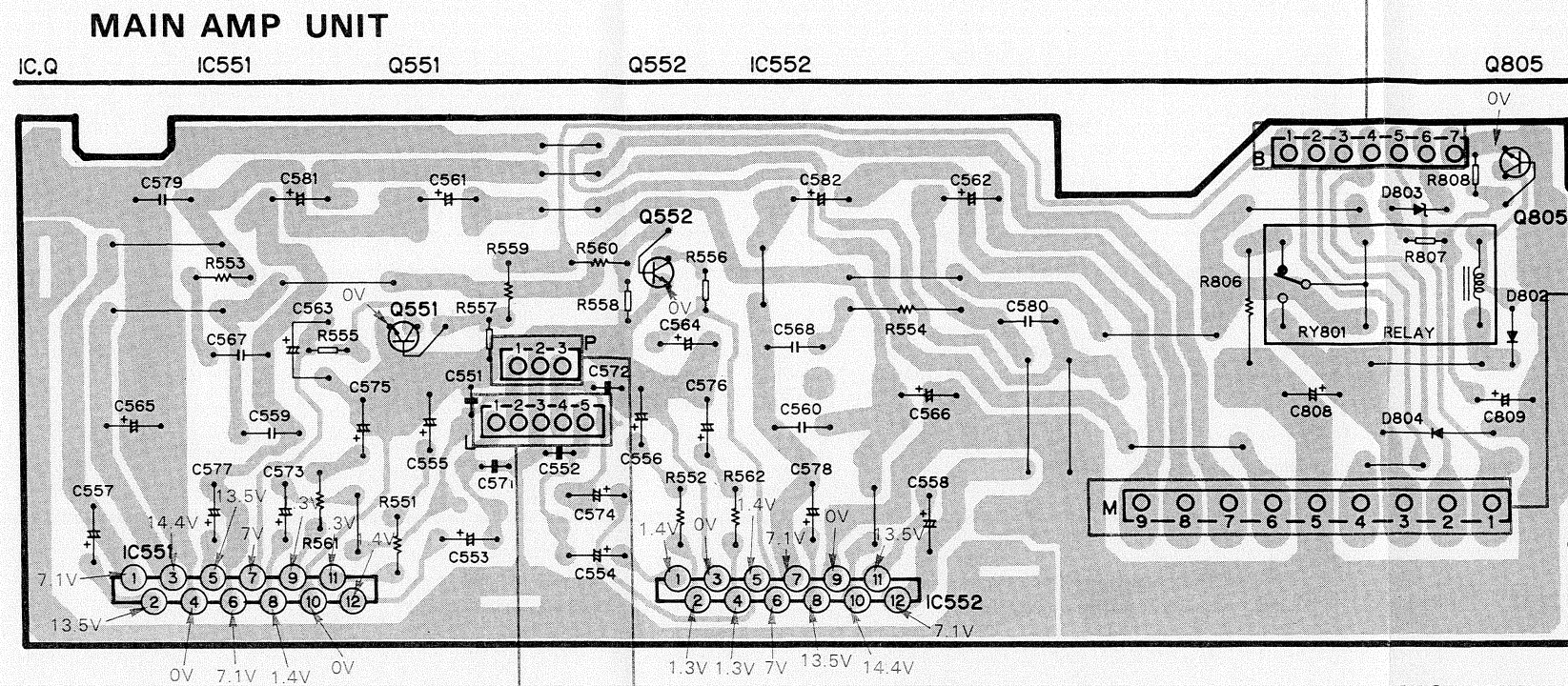
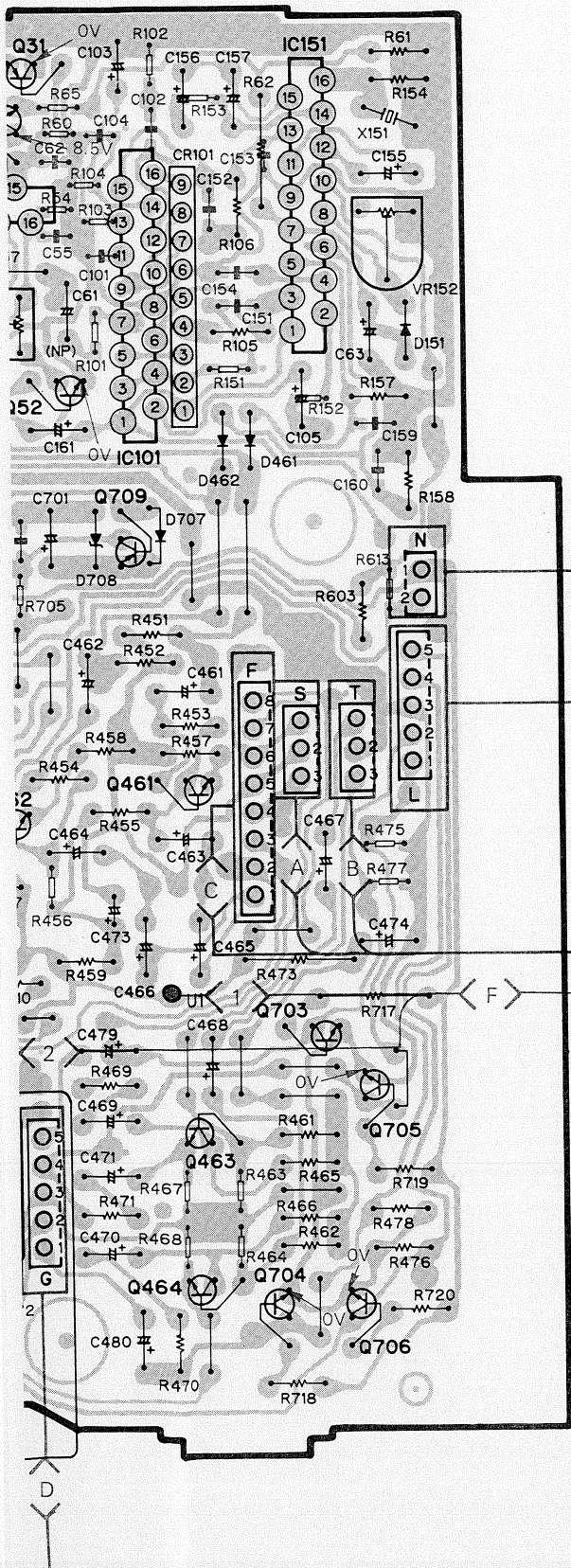
1	2	3	4	5	6
2.6V	2.6V	2.6V	0V		0.8
9	10	11	12	13	14
4.9V	0V	4.9V	8.5V	4.9V	

IC101



IC151								
1	2	3	4	5	6	7	8	
8.5V		3.5V	2.7V					
9	10	11	12	13	14	15	16	
0V	8.4V	2.7V	2.7V	0.9V	2.7V	2.7V	3.5V	

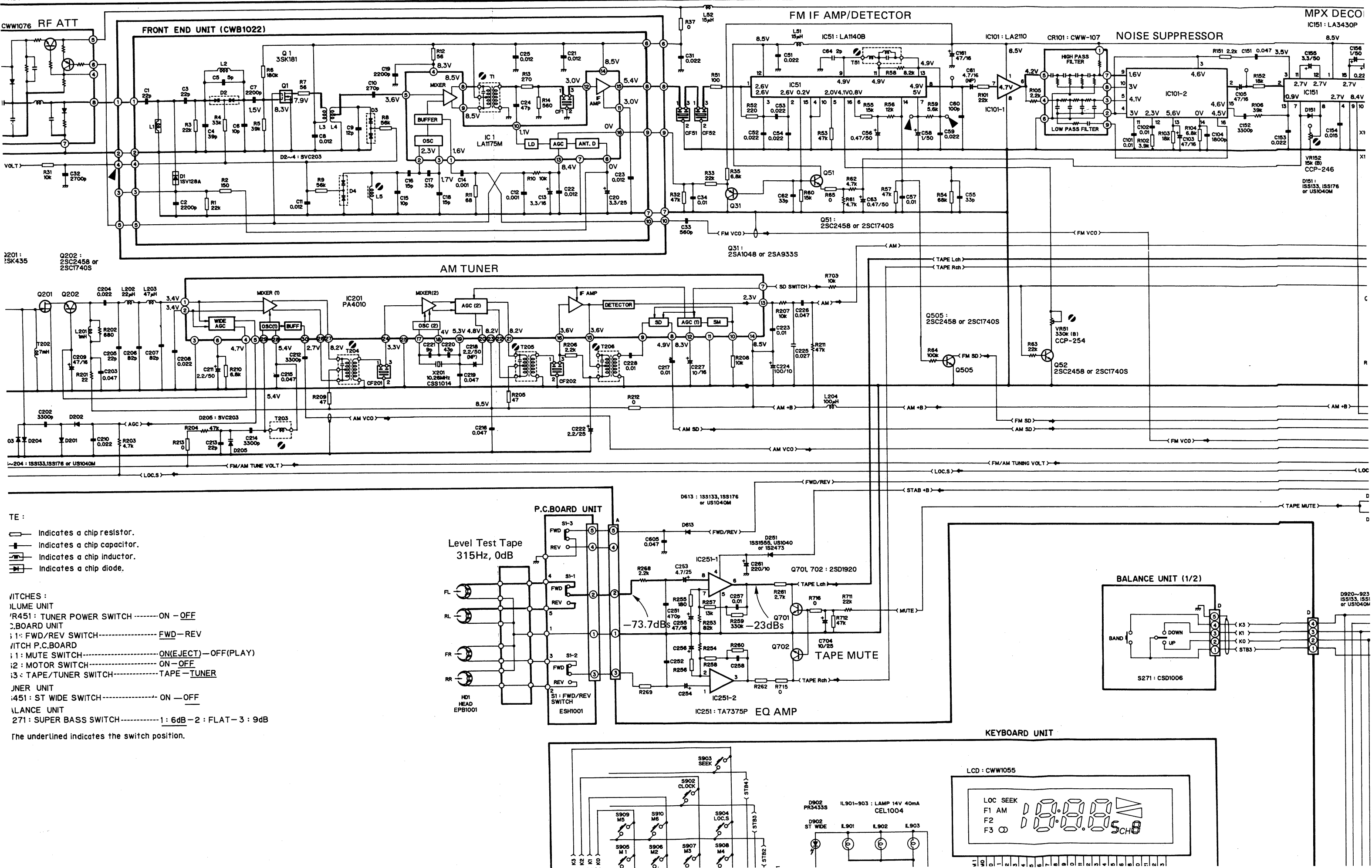
Q31 IC101 Q461 IC151  
Q52 Q709 Q464 Q704 Q706  
VR152

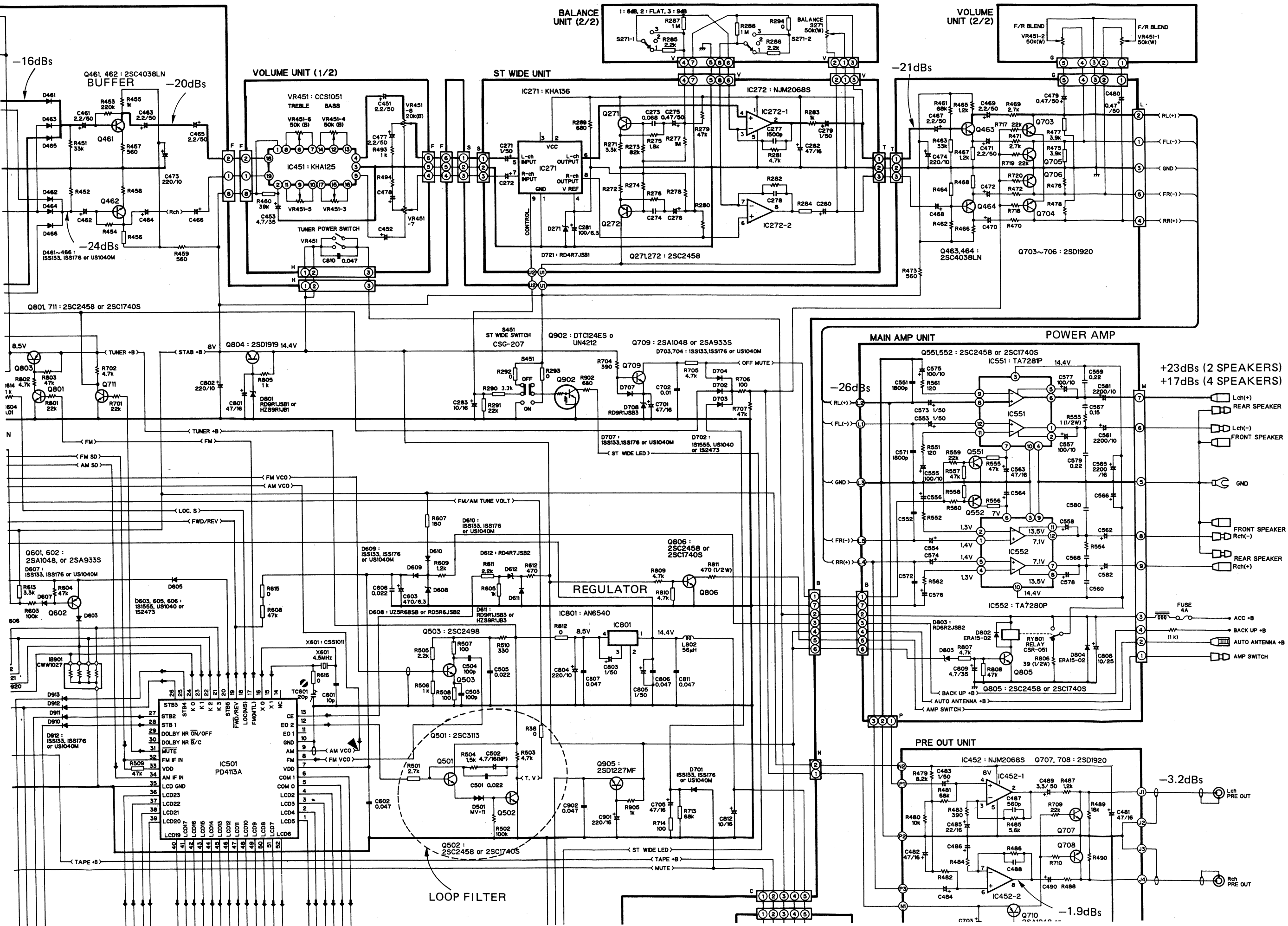




## Circuit Diagram (KEH-6262TR)

UNIT

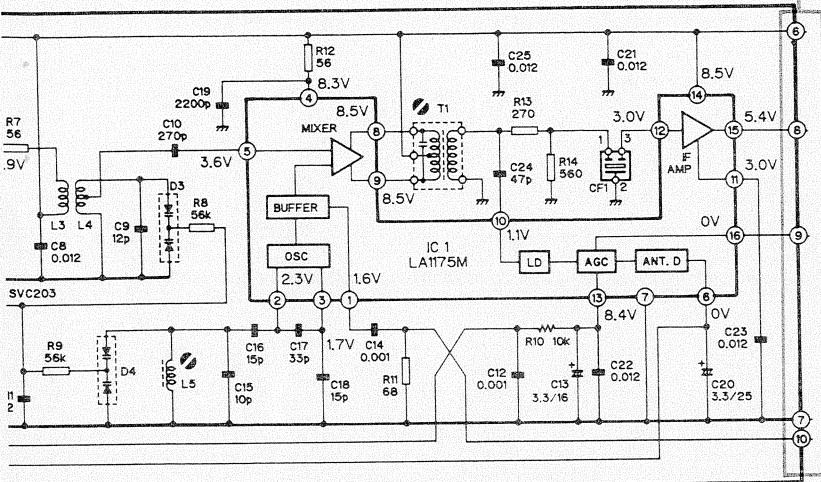




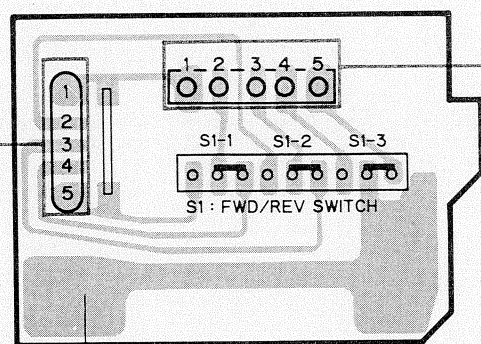


# GRAM (KEH-6262TR)

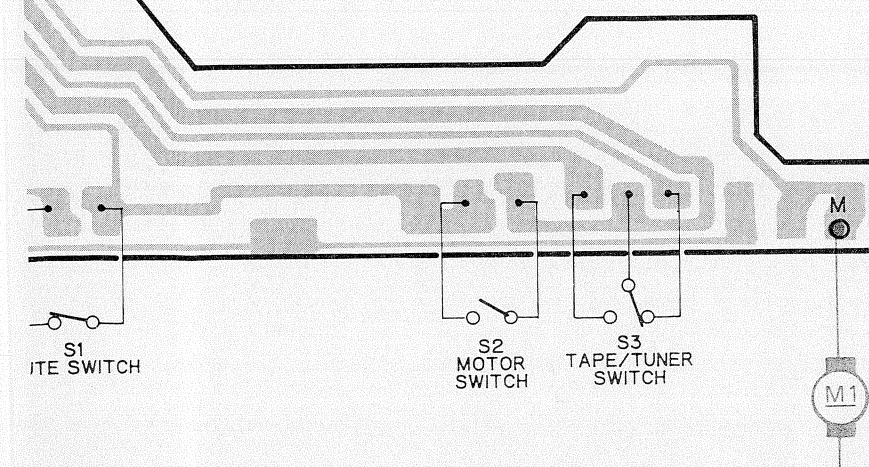
31022)



## P.C. BOARD UNIT



## SWITCH P.C. BOARD



IC201

1	2	3	4	5	6
3.4V	3.4V	0V	4.7V		
7	8	9	10	11	12
	4.9V			0V	8.3V
13	14	15	16	17	18
2.3V	8.5V	3.6V	3.6V		4V
19	20	21	22	23	24
5.3V	4.8V	8.2V		8.2V	3.3V
25	26	27	28	29	30
0V		8.2V	5.4V	5.4V	2.7V

IC151

1	2	3	4	5	6	7	8
8.5V		3.5V	2.7V	4.1V	4.2V		
9	10	11	12	13	14	15	16
0V	8.4V	2.7V	2.7V	0.9V	2.7V	2.7V	3.5V

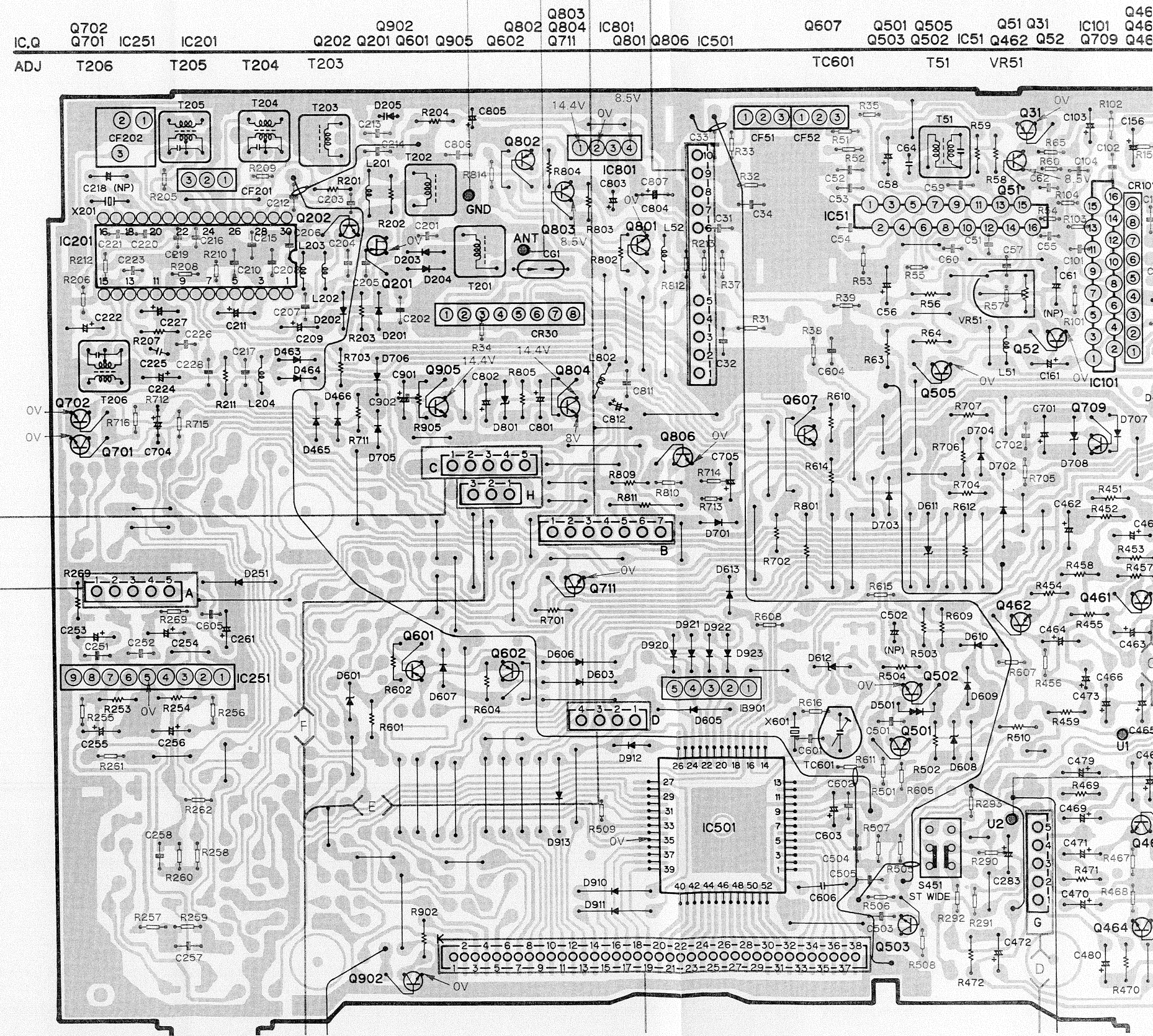
IC51

1	2	3	4	5	6	7	8
2.6V	2.6V	2.6V	0V	2.0V	0.8V	5V	4.9V
9	10	11	12	13	14	15	16
4.9V	0V	4.9V	8.5V	4.9V		0.2V	4.1V

IC101

1	2
8.5V	
9	10
1.6V	3V

## TUNER UNIT









2

3

4

5

6

• Parts List

NOTE:

- For your parts list, see the parts list on page 10.
- Parts marked with a star (★) are standard parts.
- Parts marked with two stars (★★) are general parts.
- This classification is for model number identification.
- Parts whose length is longer than 100 mm are marked with a star (★).

A

Mark	No.	Part
	1	CXA
	2	CNG
	3	
	4-13	...
	14	CND

B

	15	CBN
	16	CNK
★	17	CAA
★	18	CAA
★	19	CAA
★	20	CAA
★	21	CAA
	22	CDE
	23	CXA

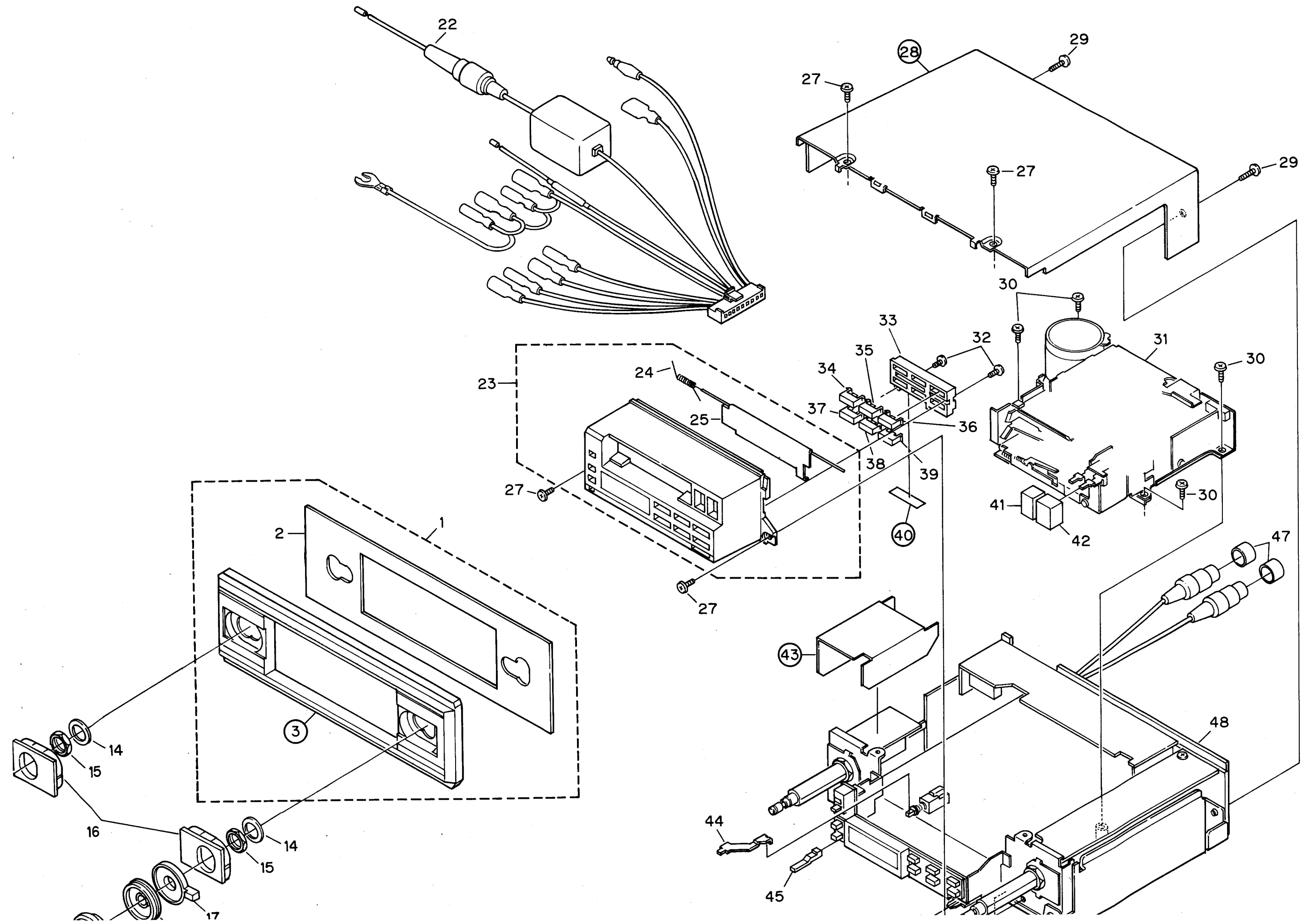
—

C

		CXA
	24	CBH
	25	CAT
		CAT
	26	...
	27	BMZ
	28	
	29	BMZ
	30	BMZ

—

D



ol, the fast moving items are indicated with the  
 TER THAN ★.  
 djusted by each distributor because it depends on  
 humidity, etc.  
 re omitted are subject to being not supplied.  
 t always kept in stock. Their delivery time may be  
 y be unavailable.

Description	Mark	No.	Part No.	Description
Panel Kit	◎	31	EXK1010	Cassette Mechanism Assy (KEH-8282TR)
Panel	◎		EXK1130	Cassette Mechanism Assy (KEH-6262TR)
Spacer		32	CBA1058	Screw
It		33	CNV1344	Lens
Up	★	34	CAC1313	Button (1)
Job	★	35	CAC1314	Button (2)
Job	★	36	CAC1315	Button (3)
Job	★	37	CAC1316	Button (4)
Job	★	38	CAC1317	Button (5)
Job	★	39	CAC1318	Button (6)
Board Assy		40		Sheet
Panel Unit (KEH-8282TR)	★	41	CAC1358	Button (◀◀)
	★	42	CAC1357	Button (▶▶)
Panel Unit (KEH-6262TR)		43		Insulator
Spring		44	CNH-134	Lever
For (KEH-8282TR)	★	45	CAE-203	Button (ST Wide)
For (KEH-6262TR)	★	46	CAC1355	Button (Direction)
		47	CNW-829	Cap
	◎	48	CWM1327	Tuner Assy (KEH-8282TR)
Prew	◎		CWM1330	Tuner Assy (KEH-6262TR)
Use Assy		49		Spacer

## 13. TUNER ASSY EXPLODED VIEW

### • Parts List

Mark	No.	Part No.	Description	Mark	No.	Part No.	Description
◎	1	CWS1068	Keyboard Unit (KEH-8282TR)		43		Plug
					44		Plug
◎		CWS1074	Keyboard Unit (KEH-6262TR)		45		Plug
	2	CNP1358	P.C. Board		46	CWB1022	Front End Unit
					47		Connector
	3	CNV1347	Rubber		48		Connector
	4	PMZ20P100FMC	Screw		49		Connector
★	5	CAC1319	Button (Clock)				(6P, KEH-8282TR)
★	6	CAC1320	Button (Seek)				Connector
★	7	CAC1321	Button (Loc. S)				(5P, KEH-6262TR)
	8	CNV1345	Lens		50		Connector
	9	PMZ20P050FMC	Screw				(KEH-8282TR)
	10	CNN-137	Spacer		51		Holder
	11	CNV1409	Lens		52		Connector
	12		Plate		53		Spacer
	13	CWW1055	LCD		54		Connector
	14	CNY-214	Connector	★★	55	CSD1006	Switch
	15		Insulator		56		Connector
	16	CNH-136	Holder		57	BMZ30P060FMC	Screw
	17	CNG-290	Holder	★★	58	AN6540	IC
	18	CBN-028	Nut		59		Shield
	19	CNV1088	Cap		60		Holder
	20	CNV1102	Bush	★★	61	TA7280P	IC
★★	21	CEL1004	Lamp	★★	62	TA7281P	IC
	22	CNV1346	Rubber		63		Connector
★	23	PR3433S	LED (KEH-8282TR)		64		Connector
★	24	PR3433S	LED		65	BMZ26P050FMC	Screw
★	25	BG3433S	LED (KEH-8282TR)		66	CDH1063	Antenna Cable
	26		Plug		67	BMZ26P080FMC	Screw
	27		Plug		68	BMZ30P080FMC	Screw
★★	28	CCS1051	Volume		69		Heat Sink
	29		Plug		70		Connector
	30	CDE1515	Connector		71		Connector
	31		Connector		72		Insulator
	32		Connector		73		Chassis Unit
	33		Connector		74		Connector
	34		Plug				
	35		Clamper				
	36	BMZ30P050FMC	Screw				
	37	CBE-084	Spacer				

• Tuner Assy

A

B

C

D

A

B

C

D

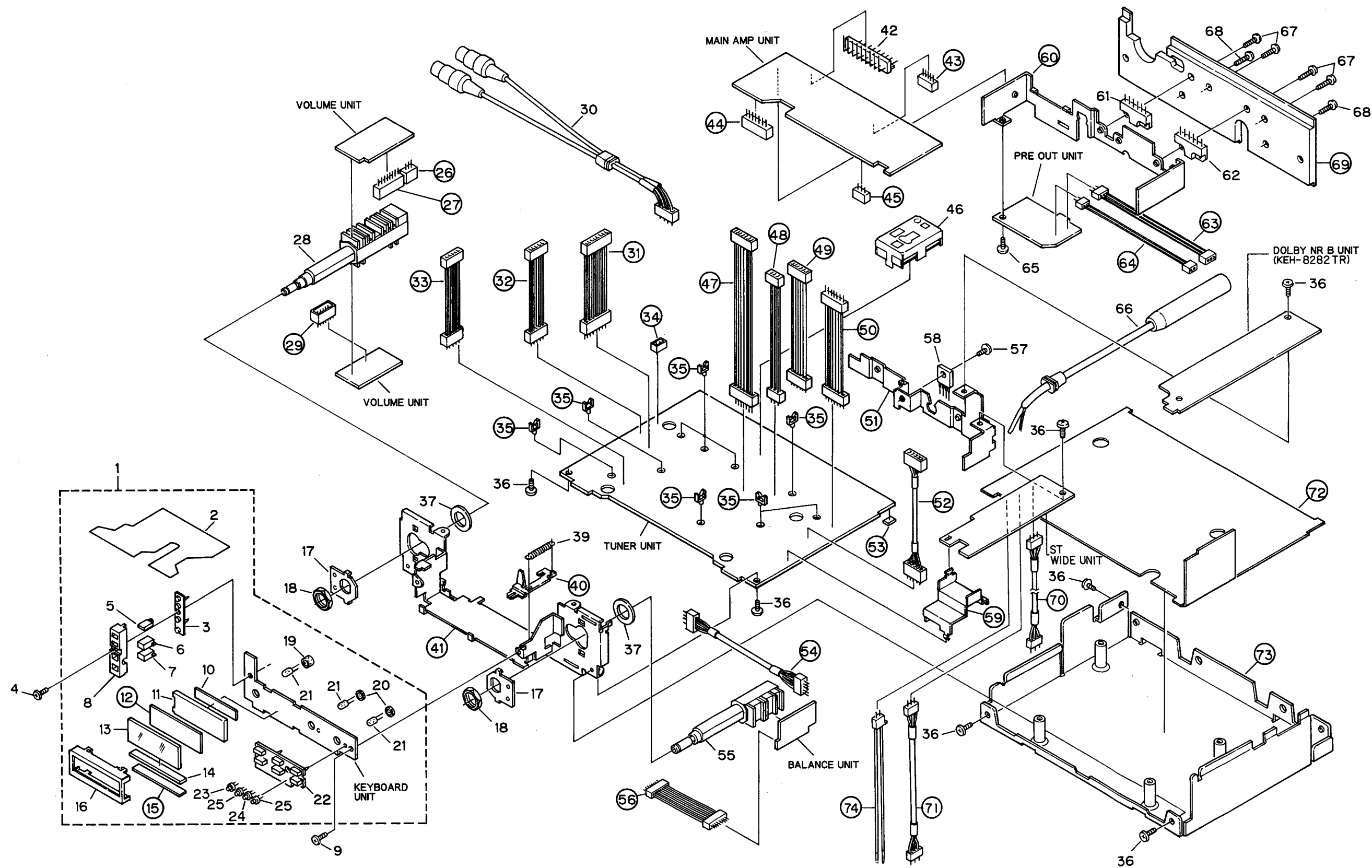


Fig. 12

14. CASSETTE MECHANISM ASSY (KEH-8282TR)

\*See page 38 for parts list.

Mark No.	Part No.	Description
92	EXA1006	Arm Unit
93	EXA1020	Gear Unit
94	ELA1032	Collar
95	HBA-212	Screw
96	EBH1007	Spring
97	EBH1006	Spring
98	EBH1014	Spring
99	EBF1001	Washer
100	ENV1018	Arm Unit
101	ENV1018	Gear
102	ENV1017	Gear
103	EBH1022	Spring
104	EXA1005	Arm Unit
105		Plug
106	EBA1006	Screw
107	BMZ20P070FUC	Screw
108		Bracket Unit
109	EBH1016	Spring
110		Lever Unit
111	EBH1048	Spring
112	EBH1005	Spring
113		Lever
114		Lever
115		Arm
116	WH23FMC	Washer

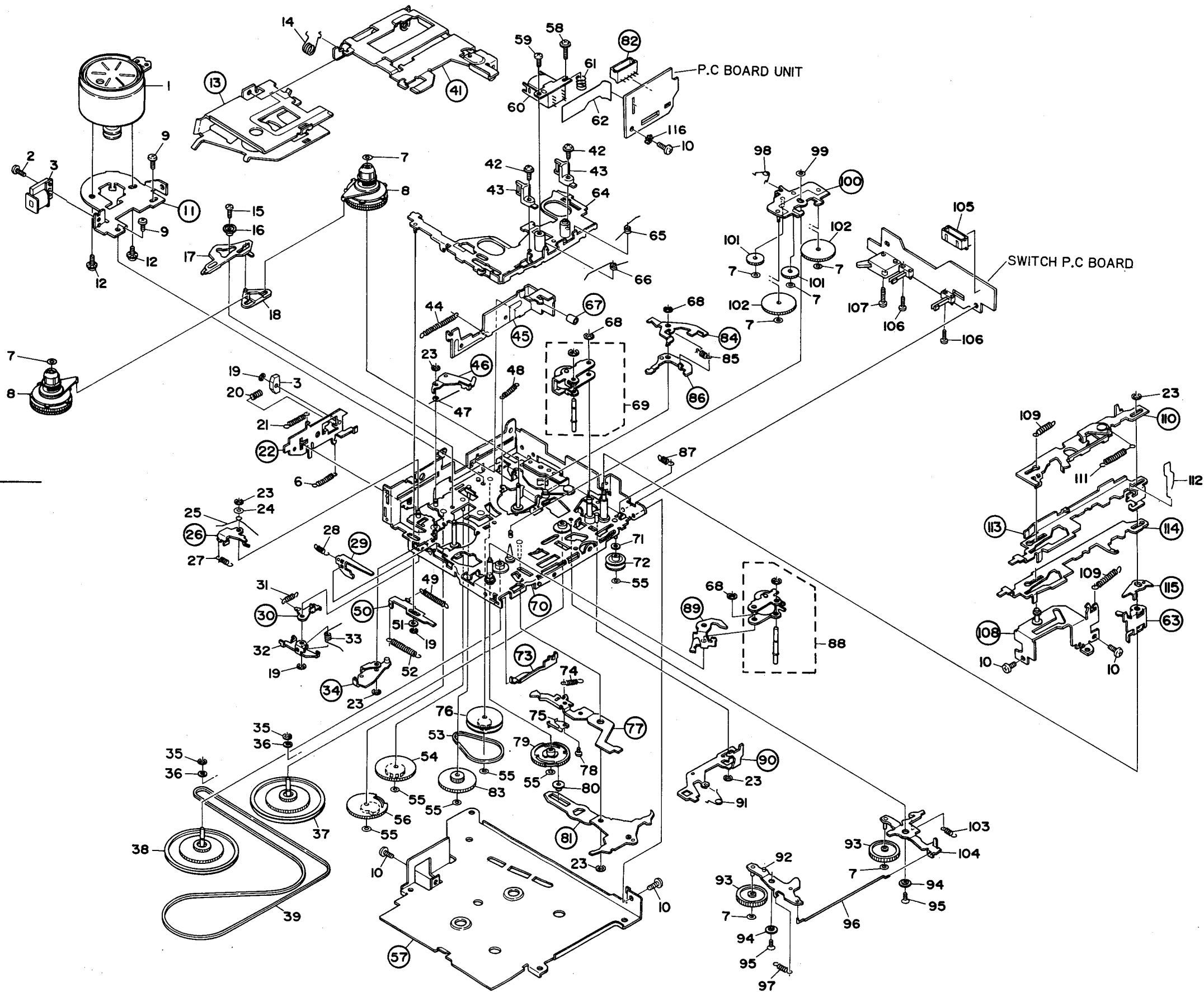


Fig. 13

## ● Parts List

Mark	No.	Part No.	Description	Mark	No.	Part No.	Description
★★	1	EXA1013	Motor Unit		47	EBH1040	Spring
	2	EBA1008	Screw		48	EBH1041	Spring
★	3	EXP1001	Solenoid		49	EBH1021	Spring
	4,5	.....			50		Lever
	6	EBH1011	Spring		51	EBE1001	Washer
	7	CBF-166	Washer		52	EBH1009	Spring
★★	8	EXA1012	Reel Unit	★★	53	ENT1002	Belt
	9	BMZ23P030FMC	Screw		54	ENV1012	Gear
	10	BSZ23P040FMC	Screw		55	CBF-135	Washer
	11		Bracket		56	ENV1014	Gear
	12	PMS26P025FUC	Screw		57		Cover
	13		Cassette Holder		58	EBA1007	Screw
	14	EBH1019	Spring		59	BMZ20P050FMC	Screw
	15	EBA1009	Screw	★★	60	EPB1001	Head
	16	ELA1039	Collar		61	CBH-198	Spring
	17	ENV1022	Arm		62	ENP1003	P.C. Board
	18	ENV1021	Arm		63		Arm
	19	YE12FUC	Washer		64	EXA1004	Head Base Unit
	20	EBH1038	Spring		65	EBH1004	Spring
	21	EBH1012	Spring		66	EBH1003	Spring
	22		Lever Unit		67		Cushion
	23	YE15FUC	Washer		68	YE20FUC	Washer
	24	CBF-165	Washer		69	EXA1002	Roller Unit
	25	EBH1035	Spring		70		Chassis Unit
	26		Arm		71	EBF1004	Washer
	27	EBH1037	Spring		72	ENV1009	Pulley
	28	EBH1039	Spring		73		Lever
	29		Arm		74	EBH1025	Spring
	30		Arm		75	EBL1001	Spring
	31	EBH1010	Spring		76	ENV1010	Pulley
	32		Arm		77		Arm
	33	EBH1008	Spring		78	HBA-147	Screw
	34		Arm Unit		79	ENV1028	Gear
	35	CBG1001	Washer		80	ELA1018	Collar
	36	HBH-179	Washer		81		Arm
	37	ENV1029	Flywheel (N)		82		Plug
	38	ENV1030	Flywheel (R)		83	ENV1011	Gear
★★	39	CNT-091	Belt		84		Arm
	40	.....			85	EBH1024	Spring
	41		Cassette Frame Unit		86		Ratchet
	42	PMS20P040FMC	Screw		87	EBH1018	Spring
	43	ENV1016	Tape Guide	★★	88	EXA1003	Roller Unit
	44	EBH1047	Spring		89		Arm
	45		Lever		90		Lever
	46		Arm		91	EBH1013	Spring

\*See page 36 for parts list.

## 15. CASSETTE MECHANISM ASSY (KEH-6262TR)

## ● Parts List

Mark	No.	Part No.	Description	Mark	No.	Part No.	Description
★	1	EXA1013	Motor Unit	49	EBH1021	Spring	
	2,3	.....		50		Lever	
	4	BMZ20P025FMC	Screw	51	EBE1001	Washer	
	5		Holder	52	EBH1009	Spring	
	6	EBH1011	Spring	★★	53	ENT1002	Belt
	7	CBF-166	Washer	54	ENV1012	Gear	
★★	8	EXA1012	Reel Unit	55	CBF-135	Washer	
	9	BMZ23P030FMC	Screw	56	ENV1014	Gear	
	10	BSZ23P040FMC	Screw	57		Cover	
	11		Bracket	58	EBA1007	Screw	
	12	PMS26P025FUC	Screw	59	BMZ20P050FMC	Screw	
	13		Cassette Holder	★★	60	EPB1001	Head
	14	EBH1019	Spring	61	CBH-198	Spring	
	15	EBA1009	Screw	62	ENP1003	P.C.Board	
	16	ELA1039	Collar	63		Arm	
	17	ENV1022	Arm	64	EXA1004	Head Base Unit	
	18	ENV1021	Arm	65	EBH1004	Spring	
	19	YE12FUC	Washer	66	EBH1003	Spring	
20-22		VACANT		67		Cushion	
	23	YE15FUC	Washer	68	YE20FUC	Washer	
	24	CBF-165	Washer	69	EXA1002	Roller Unit	
	25	EBH1035	Spring	70		Chassis Unit	
	26		Arm	71	EBF1004	Washer	
	27	EBH1037	Spring	72	ENV1009	Pulley	
	28	EBH1039	Spring	73		Lever	
	29		Arm	74	EBH1025	Spring	
	30		Arm	75	EBL1001	Spring	
	31	EBH1010	Spring	76	ENV1010	Pulley	
	32		Arm	77		Arm	
	33	EBH1008	Spring	78	HBA-147	Screw	
	34		Arm Unit	79	ENV1028	Gear	
	35	CBG1001	Washer	80	ELA1018	Collar	
	36	HBF-179	Washer	81		Arm	
	37	ENV1029	Flywheel (N)	82		Plug	
	38	ENV1030	Flywheel (R)	83	ENV1011	Gear	
★★	39	CNT-091	Belt	84		Arm	
	40	.....		85	EBH1024	Spring	
	41		Cassette Frame Unit	86		Ratchet	
	42	PMS20P040FMC	Screw	87	EBH1018	Spring	
	43	ENV1016	Tape Guide	★★	88	EXA1003	Roller Unit
	44	EBH1047	Spring	89		Arm	
	45		Lever	90		Lever	
	46		Arm	91	EBH1013	Spring	
	47	EBH1040	Spring	92	EXA1006	Arm Unit	
	48	EBH1041	Spring	93	EXA1020	Gear Unit	

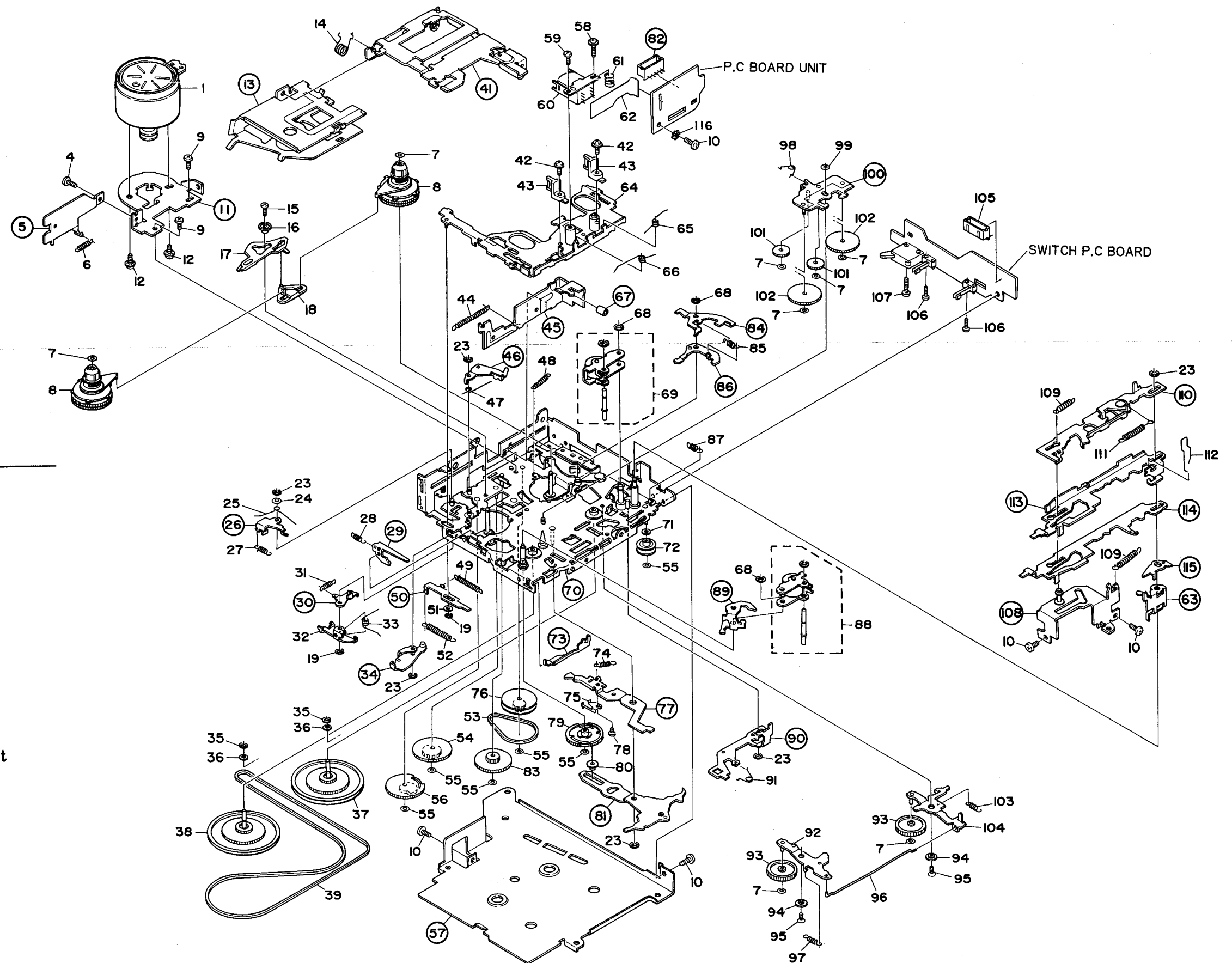
## ● Cassette Mechanism Assy (KEH-6262TR)

A

B

C

D



Mark No.	Part No.	Description
94	ELA1032	Collar
95	HBA-212	Screw
96	EBH1007	Spring
97	EBH1006	Spring
98	EBH1014	Spring
99	EBF1001	Washer
100		Arm Unit
101	ENV1018	Gear
102	ENV1017	Gear
103	EBH1022	Spring
104	EXA1005	Arm Unit
105		Plug
106	EBA1006	Screw
107	BMZ20P070FUC	Screw
108		Bracket Unit
109	EBH1016	Spring
110		Lever Unit
111	EBH1048	Spring
112	EBH1005	Spring
113		Lever
114		Lever
115		Arm
116	WH23FMC	Washer

Fig. 14

## 16. ELECTRICAL PARTS LIST

## NOTE:

- For your parts Stock Control, the fast moving items are indicated with the marks \*\* and \*.
  - \*\* : GENERALLY MOVES FASTER THAN \*.
  - This classification shall be adjusted by each distributor because it depends on model number, temperature, humidity, etc.
  - Parts whose parts numbers are omitted are subject to being not supplied.
  - The part numbers shown below indicate chip components.
- Chip Resistor  
RS1/8S□□□J, RS1/10S□□□J
- Chip Capacitor (except for CQS.....)  
CKS....., CCS....., CSZS.....

Tuner Assy(KEH-8282TR)	
Consists of	
• Tuner Unit	
• Main Amp Unit	
• Front End Unit(CWB1022)	
• Volume Unit	
• Balance Unit	
• Pre Out Unit	
• Dolby NR B Unit	
• ST Wide Unit	

Unit Number :  
Unit Name : Tuner Assy(KEH-8282TR)

## MISCELLANEOUS

Mark	Circuit Symbol & No.	Part Name	Part No.
** IC 51	LA1140B		
** IC 101	LA2110		
** IC 151	LA3430P		
** IC 201	PA4010		
** IC 251	TA7375P		
** IC 271	KHA136		
** IC 272	NJM2068S		
** IC 301	BA1104LS		
** IC 401	CW1053 (KHD501)		
** IC 451	KHA125		
** IC 452	NJM2068S		
** IC 501	PD4113A		
** IC 551	TA7281P		
** IC 552	TA7280P		
** IC 801	AN6540		
** Q 31 601 602 709 710	2SA1048 (2SA933S)		
** Q 51 52 202 551 552 805	2SC2458 (2SC1740S)		
** Q 201	2SK435		
** Q 251 252 271 272 401 402	2SC2458 (2SC1740S)		
** Q 403 701 702 703 704 705 706 707 708	2SD1920		
** Q 461 462 463 464 607	2SC4038LN		
* D 501	MV-11		
* D 601	UZ5R1BSB (RD5R1JSB2)		
* D 607 609 610 613 701 703 704 705 706 707	1SS133 (1SS176)		
* D 608	UZ5R6BSB (RD5R6JSB2)		
* D 611	RD9R1JSB3 (HZS9R1JB3)		
* D 612	RD4R7JSB2		
* D 708	RD9R1JSB3		
* D 801	RD9R1JSB1 (HZS9R1JB1)		
* D 802 804	ERA15-02		
* D 803	RD6R2JSB2		
L 51 52	CTF-156	Ferri-Inductor	
L 201	CTF1026	Ferri-Inductor	
L 202	LAU220K	Ferri-Inductor	
L 203	LAU470K	Ferri-Inductor	
L 204	CTF-113	Coil	
L 802	CTF1037	Ferri-Inductor	
T 51	CTC1008	Coil	
T 201	CTB1015	Coil	
T 202	CTB1016	Coil	
T 203	CTB1017	Coil	
T 204	CTE1013	Coil	
T 205	CTE1014	Coil	
T 206	CTE1015	Coil	
TC 601	CCG-070	Trimmer	
CG 1	CCX-006	Capacitor with Discharge Gap	
CF 51 52	CTF-182	Ceramic Filter	
CF 201	CTF1027	Filter	
CF 202	CTF-100	Filter	
CR 30	CW1076		
CR 101	CW107		
IB 901	CW1027		
X 151	CSS1022	Ceramic Resonator	
X 201	CSS1014	Xtal	
X 601	CSS1011	Xtal	
** S 271	CSD1006	Switch	
** S 451	CSG-207	Switch	
** VR 51	CCP-254	Semi-fixed 330kΩ(B)	
** VR 152	CCP-246	Semi-fixed 15kΩ(B)	
** VR 301 302	CCP-248	Semi-fixed 33kΩ(B)	
** VR 451	CCS1051	Volume	
RY 801	CSR-051	Relay	
	CWB1022	Front End Unit	

## RESISTORS

Mark	Circuit Symbol & No.	Part Name	Part No.	Mark	Circuit Symbol & No.	Part Name	Part No.
R 31 208	RS1/8S103J			R 305 306	RD1/4PS434JL		
R 32 53 608 712	RS1/8S473J			R 307	RD1/4PM824J		
R 33 101	RS1/8S223J			R 308	RD1/4PS824JL		
R 34	RS1/10S221J			R 309 310	RD1/4PS682JL		
R 35 104 210	RS1/10S682J			R 313 706	RD1/4PS101JL		
R 37 38 39 65 212 213 812 814	RS1/8S0R0J			R 401	RD1/4PS561JL		
R 51 507 508 714	RS1/8S101J			R 402	RS1/8S103J		
R 52	RS1/8S221J			R 403	RD1/4PM223J		
R 54	RS1/10S683J			R 404	RD1/4PS473JL		
R 55 60	RS1/10S153J			R 405	RD1/4PS223JL		
R 56	RD1/4PS123JL			R 451 452	RD1/4PS333JL		
R 57	RS1/10S473J			R 453 454	RD1/4PS224JL		
R 58 479	RD1/4PS822JL			R 455 493 494 614 805 905	RD1/4PS102JL		
R 59 485 486	RD1/4PS562JL			R 456 605	RS1/8S102J		
R 61 203 503 601 702 802 809	RD1/4PS472JL			R 457 458 459	RD1/4PS561JL		
R 62	RD1/4PM472J			R 460	RS1/8S393J		
R 63 559 560 701 709 710 711 718 719 720	RD1/4PS223JL			R 461 462 481 482	RD1/4PS683JL		
R 64 602 603	RD1/4PS104JL			R 463 464	RS1/8S333J		
R 102 475 477	RS1/8S392J			R 465 466 609	RD1/4PS122JL		
R 103 152	RS1/10S183J			R 467 468	RS1/8S122J		
R 105 804	RD1/4PS222JL			R 469 470 471 472	RD1/4PS272JL		
R 106	RD1/4PS393JL			R 473	RD1/4PM561J		
R 151 206 611	RS1/8S222J			R 476 478	RD1/4PS392JL		
R 153 705 810	RS1/8S472J			R 480 703	RD1/4PS103JL		
R 154	RD1/4PS334JL			R 483 484 704	RD1/4PS391JL		
R 157 158	RD1/4PS222JL			R 489 490	RD1/4PS183JL		
R 201	RD1/4PS220JL			R 502	RD1/4PS104JL		
R 202	RD1/4PS681JL			R 504	RD1/4PS152JL		
R 204 211 604 610 707 803	RD1/4PS473JL			R 505	RS1/8S222J		
R 205 209	RS1/10S470J			R 506	RS1/8S102J		
R 207 267	RD1/4PS103JL			R 509	RS1/10S473J		
R 253 254	RD1/4PS823JL			R 510	RD1/4PS331JL		
R 255 256 607	RS1/8S181J			R 551 552 561 562	RD1/4PS121JL		
R 257 258	RS1/8S133J			R 553 554	RD1/2PS010JL		
R 259 260	RS1/8S334J			R 555 556 807	RS1/8S472J		
R 261 262 501	RS1/8S272J			R 557 558 808	RS1/8S473J		
R 263 264 290 613	RS1/8S332J			R 606	RD1/4PS102JL		
R 265 266	RD1/4PS104JL			R 612	RD1/4PM171J		
R 269	RS1/8S0R0J			R 615 616 715 716	RS1/8S0R0J		
R 271 272	RD1/4PS332JL			R 708	RD1/4PS184JL		
R 273 274	RD1/4PS823JL			R 713	RS1/10S683J		
R 275 276 487 488	RD1/4PS182JL			R 717 801	RD1/4PM223J		
R 277 278	RD1/4PS105JL			R 806	RD1/2PS390JL		
R 279 280	RD1/4PS473JL			R 811	RD1/2PS471JL		
R 281 282	RD1/4PS472JL			R 901	RD1/4PS821JL		
R 283	RD1/4PS102JL			R 902 903 904	RD1/4PS681JL		
R 284	RS1/8S102J						
R 285 286	RS1/8S222J						
R 287 288	RS1/8S105J						
R 289	RD1/4PS681JL						
R 291	RS1/8S223J						
R 292 293 294	RS1/8S0R0J						
R 301 302	RD1/4PS332JL						
R 303 304 311 312	RD1/4PS473JL						



## CAPACITORS

Mark	====	Circuit Symbol & No.	====	Part Name	Part No.
C 31	52	53	54	59	204 208 210
C 32					
C 33					
C 34	102	217	228	604	
C 51	153				
C 55	62				
C 56	63				
C 57	101				
C 58	156				
C 60					
C 61					
C 64					
C 103	105				
C 104	551	552	571	572	
C 151	215				
C 152	202	212	214		
C 154					
C 155					
C 157					
C 159	160				
C 161	255	256	481	482	701 705
C 201	223				
C 203	216	219	226	605	902
C 205	213				
C 206	207				
C 209	563	564	801		
C 211	467	468			
C 218					
C 220					
C 221					
C 222					
C 224					
C 225					
C 227					
C 251	252				
C 253	254				
C 257	258	319	702		
C 259	260				
C 261	802				
C 263	264				
C 271	272	279	280		
C 273	274				
C 275	276	479	480		
C 277	278				
C 281					
C 282					
C 283					
C 301	302				
C 303	304				
C 305	306	309	310		
C 307	308				
C 311	312				
C 313	314				
C 315	316				
C 317	318				
C 401					
C 451	452	477	478		
C 453					
C 461	462	463	464	465	466 469 470 471 472
C 473	474	804			
C 483	553	554	573	574	
C 484	803				
C 485	486				
C 487	488				
C 489	490				
C 501	505				
C 502					
C 503	504				
C 555	556	557	558	575	576 577 578
C 559	560	579			
C 561	562	581	582		
C 565	566				
C 567	568				
C 580					
C 601					
C 602	806	807	810	811	
C 603					
C 606					
C 703					
C 704	808				
C 805					
C 809					
C 812					
C 901					
CKSYB223K50					
CKSVB272K50					
CKSYB561K50					
CKSYB103K50					
CKSQYB223K50					
CCSQCH330J50					
CEAR47M50LS2					
CKSQYB103K50					
CEA010M50LL					
CCSQCH101J50					
CEA4R7M16NPLI					
CCDCH020D50					
CEA470M16LS					
CKSQYB182K50					
CKSYF473750					
CKSYB332K50					
CKSYB153K25					
CEA3R3M50LS					
CSZAR22M35					
CKSYB393K25					
CEA470M16LS					
CKSQYB103K50					
CKSQYF473750					
CCSCH220J50					
CCSCH820J50					
CEA470M16L2					
CEA2R2M50LS2					
CEA2R2M35NPLI					
CCSQCH430J50					
CCSQCH090D50					
CSZA2R2M25					
CEA101M10L2					
CGDYX273M25					
CEA100M16L2					
CKSYB471K50					
CEANL4R7M25L					
CKSYB103K50					
CKSYB223K50					
CEA221M10L2					
CEA100M25LS					
CEA010M50LS2					
CQMA683J50					
CEAR47M50LS2					
CKPYX152M16L					
CEA101M6R3LS					
CEA470M16LS					
CEA100M16LS					
CEA4R7M35LS					
CQMA472J50					
CQMA333J50					
CKSYB103K50					
CEA0R1M50L2					
CQMA102J50					
CEA4R7M16NPLI					
CEA221M10L2					
CEA010M50LS2					
CQMA683J50					
CEAR47M50LS2					
CKPYX152M16L					
CEA101M6R3LS					
CEA470M16LS					
CEA100M16LS					
CEA4R7M35LS					
CQMA472J50					
CQMA333J50					
CKSYB103K50					
CEA0R1M50L2					
CQMA102J50					
CEA4R7M16NPLI					
CEA221M10L2					
CEA010M50LS2					
CQMA683J50					
CEAR47M50LS2					
CKPYX152M16L					
CEA101M6R3LS					
CEA470M16LS					
CEA100M16LS					
CEA4R7M35LS					
CQMA472J50					
CQMA333J50					
CKSYB103K50					
CEA0R1M50L2					
CQMA102J50					
CEA4R7M16NPLI					
CEA221M10L2					
CEA010M50LS2					
CQMA683J50					
CEAR47M50LS2					
CKPYX152M16L					
CEA101M6R3LS					
CEA470M16LS					
CEA100M16LS					
CEA4R7M35LS					
CQMA472J50					
CQMA333J50					
CKSYB103K50					
CEA0R1M50L2					
CQMA102J50					
CEA4R7M16NPLI					
CEA221M10L2					
CEA010M50LS2					
CQMA683J50					
CEAR47M50LS2					
CKPYX152M16L					
CEA101M6R3LS					
CEA470M16LS					
CEA100M16LS					
CEA4R7M35LS					
CQMA472J50					
CQMA333J50					
CKSYB103K50					
CEA0R1M50L2					
CQMA102J50					
CEA4R7M16NPLI					
CEA221M10L2					
CEA010M50LS2					
CQMA683J50					
CEAR47M50LS2					
CKPYX152M16L					
CEA101M6R3LS					
CEA470M16LS					
CEA100M16LS					
CEA4R7M35LS					
CQMA472J50					
CQMA333J50					
CKSYB103K50					
CEA0R1M50L2					
CQMA102J50					
CEA4R7M16NPLI					
CEA221M10L2					
CEA010M50LS2					
CQMA683J50					
CEAR47M50LS2					
CKPYX152M16L					
CEA101M6R3LS					
CEA470M16LS					
CEA100M16LS					
CEA4R7M35LS					
CQMA472J50					
CQMA333J50					
CKSYB103K50					
CEA0R1M50L2					
CQMA102J50					
CEA4R7M16NPLI					
CEA221M10L2					
CEA010M50LS2					
CQMA683J50					
CEAR47M50LS2					
CKPYX152M16L					
CEA101M6R3LS					
CEA470M16LS					
CEA100M16LS					
CEA4R7M35LS					
CQMA472J50					
CQMA333J50					
CKSYB103K50					
CEA0R1M50L2					
CQMA102J50					
CEA4R7M16NPLI					
CEA221M10L2					
CEA010M50LS2					
CQMA683J50					
CEAR47M50LS2					
CKPYX152M16L					
CEA101M6R3LS					
CEA470M16LS					
CEA100M16LS					
CEA4R7M35LS					
CQMA472J50					
CQMA333J50					
CKSYB103K50					
CEA0R1M50L2					
CQMA102J50					
CEA4R7M16NPLI					
CEA221M10L2					
CEA010M50LS2					
CQMA683J50					
CEAR47M50LS2					
CKPYX152M16L					
CEA101M6R3LS					
CEA470M16LS					
CEA100M16LS					
CEA4R7M35LS					
CQMA472J50					
CQMA333J50					
CKSYB103K50					
CEA0R1M50L2					
CQMA102J50					
CEA4R7M16NPLI					
CEA221M10L2					
CEA010M50LS2					
CQMA683J50					
CEAR47M50LS2					
CKPYX152M16L					
CEA101M6R3LS					
CEA470M16LS					
CEA100M16LS					
CEA4R7M35LS					
CQMA472J50					
CQMA333J50					
CKSYB103K50					
CEA0R1M50L2					
CQMA102J50					
CEA4R7M16NPLI					
CEA221M10L2					
CEA010M50LS2					
CQMA683J50					
CEAR47M50LS2					
CKPYX152M16L					
CEA101M6R3LS					
CEA470M16LS					
CEA100M16LS					
CEA4R7M35LS					
CQMA472J50					
CQMA333J50					
CKSYB103K50					
CEA0R1M50L2					
CQMA102J50					
CEA4R7M16NPLI					
CEA221M10L2					

Mark	====	Circuit Symbol & No.	====	Part Name	Part No.	Mark	====	Circuit Symbol & No.	====	Part Name	Part No.
** IC 551					TA7281P	CG 1				Capacitor with Discharge Gap	CCX-006
** IC 552					TA7280P	CF 51 52				Ceramic Filter	CTF-182
** IC 801					AN6540	CF 201				Filter	CTF1027
** Q 31 601 602 709 710					2SA1048	CF 202				Filter	CTF-100
					(2SA933S)	CR 30					CWW1076
** Q 51 52 202 551 552 805					2SC2458	CR 101					CWW-107
					(2SC1740S)	IB 901					CWW1027
** Q 201					2SK435	X 151				Ceramic Resonator	CSS1022
** Q 271 272					2SC2458	X 201				Xtal	CSS1014
** Q 461 462 463 464 607					2SC40381.N	X 601				Xtal	CSS1011
** Q 501					2SC3113	** S 271				Switch	CSD1006
** Q 502 505 711 801 806					2SC2458	** S 451				Switch	CSG-207
					(2SC1740S)	** VR 51				Semi-fixed 330kΩ(B)	CCP-254
** Q 503					2SC2498	** VR 152				Semi-fixed 15kΩ(B)	CCP-246
** Q 701 702 703 704 705 706 707 708					2SD1920	** VR 451				Volume	CCS1051
** Q 802 803					2SA1150	RY 801				Relay	CSR-051
** Q 804					2SD1919					Front End Unit	CWB1022
** Q 902					DTC124ES						
** Q 905					2SD1227MF						
* D 151 201 202 203 204 912 920 921 922 923					1SS133						
					(1SS176)						
					(US1040M)						
* D 205				Variable Capacitance Diode	SVC203						
* D 251 603 605 606 702 910 911 913					1S1555						
					(US1040)						
					(1S2473)						
* D 271					RD4R7JSB1	R 31 208					RS1/8S103.J
* D 461 462 463 464 465 466					1SS133	R 32 53 608 712					RS1/8S473.J
					(1SS176)	R 33 101					RS1/8S223.J
					(US1040M)	R 34					RS1/10S221.J
						R 35 104 210					RS1/10S682.J
						R 37 38 39 65 212 213 812 814					RS1/8S0R0.J
						R 51 507 508 714					RS1/8S101.J
						R 52					RS1/8S221.J
						R 54					RS1/10S683.J
						R 55 60					RS1/10S153.J
* D 501					MV-11						
* D 601					UZ5R1BSB	R 56					RD1/4PS123.JL
					(RD5R1JSB2)	R 57					RS1/10S473.J
* D 607 609 610 613 701 703 704 705 706 707					1SS133	R 58 479					RD1/4PS822.JL
					(1SS176)	R 59 485 486					RD1/4PS562.JL
						R 61 203 503 601 702 802 809					RD1/4PS472.JL
* D 608					(US1040M)	R 62					RD1/4PM472.J
					UZ5R6BSB	R 63 559 560 701 709 710 711 718 719 720					RD1/4PS223.JL
* D 611					(RD5R6JSB2)	R 64 602 603					RD1/4PS104.JL
					RD9R1JSB3	R 102 475 477					RS1/8S392.J
					(H7S9R1JB3)	R 103 152					RS1/10S183.J
* D 612					RD4R7JSB2						
* D 708					RD9R1JSB3	R 105 268 804					RD1/4PS222.JL
* D 801					RD9R1JSB1	R 106					RD1/4PS393.JL
					(H7S9R1JB1)	R 151 206 269 611					RS1/8S222.J
* D 802 804					ERA15-02	R 153 705 810					RS1/8S472.J
						R 154					RD1/4PS334.JL
* D 803					RD6R2JSB2						
L 51 52				Ferri-Inductor	CTF-156	R 157 158					RD1/4PS222.JL
L 201				Ferri-Inductor	CTF1026	R 201					RD1/4PS220.JL
L 202				Ferri-Inductor	LAU220K	R 202					RD1/4PS681.JL
L 203				Ferri-Inductor	LAU470K	R 204 211 604 610 707 803					RD1/4PS473.JL
						R 205 209					RS1/10S470.J
L 204				Coil	CTF-113						
L 802				Ferri-Inductor	CTF1037	R 207					RD1/4PS103.JL
T 51				Coil	CTC1008	R 253 254					RD1/4PS823.JL
T 201				Coil	CTB1015	R 255 256 607					RS1/8S181.J
T 202				Coil	CTB1016	R 257 258					RS1/8S133.J
						R 259 260					RS1/8S334.J
T 203				Coil	CTR1017						
T 204				Coil	CTE1013						
T 205				Coil	CTE1014						
T 206				Coil	CTE1015						
TC 601				Trimmer	CCG-070						

Mark	====	Circuit Symbol & No.	====	Part Name	Part No.	CAPACITORS	Mark	====	Circuit Symbol & No.	====	Part Name	Part No.
R 261 262 501				RS1/8S272J								
R 271 272				RD1/4PS332JL								
R 273 274				RD1/4PS823JL		C 31 52 53 54 59 204 208 210					CKSYB223K50	
R 275 276 487 488				RD1/4PS182JL		C 32					CKSYB272K50	
R 277 278				RD1/4PS105JL		C 33					CKSYB561K50	
						C 34 102 217 228 604					CKSYB103K50	
R 279 280				RD1/4PS473JL		C 51 153					CKSQB223K50	
R 281 282				RD1/4PS472JL								
R 283				RD1/4PS102JL		C 55 62					CCSQCH330.150	
R 284				RS1/8S102J		C 56 63					CEAR47M50L.S2	
R 285 286				RS1/8S222J		C 57 101					CKSQYB103K50	
						C 58 156					CEA010M50L.L	
R 287 288				RS1/8S105J		C 60					CCSQCH101.150	
R 289				RD1/4PS681JL								
R 290 613				RS1/8S332J		C 61					CEA4R7M16NPL.L	
R 291				RS1/8S223J		C 64					CCDCH020D50	
R 292 293 294				RS1/8SOR0J		C 103 105					CEA470M16L.S	
						C 104 551 552 571 572					CKSQYB182K50	
R 451 452				RD1/4PS333JL		C 151 215					CKSVF473Z50	
R 453 454				RD1/4PS224JL								
R 455 493 494 614 805 905				RD1/4PS102JL		C 152 202 212 214					CKSYB332K50	
R 456 605				RS1/8S102J		C 154					CKSYB153K25	
R 457 458 459				RD1/4PS561JL		C 155					CEA3R3M50L.S	
						C 157					CSZAR22M35	
R 460				RS1/8S393J		C 159 160					CKSYB393K25	
R 461 462 481 482				RD1/4PS683JL								
R 463 464				RS1/8S333J		C 161 255 256 481 482 701 705					CEA470M16L.S	
R 465 466 609				RD1/4PS122JL		C 201 223					CKSQYB103K50	
R 467 468				RS1/8S122J		C 203 216 219 226 605 902					CKSQYF473Z50	
						C 205 213					CCSCH220.150	
R 469 470 471 472				RD1/4PS272JL		C 206 207					CCSCH820J50	
R 473				RD1/4PM561J								
R 476 478				RD1/4PS392JL		C 209 563 564 801					CEA470M16L.2	
R 480 703				RD1/4PS103JL		C 211 467 468					CEA2R2M50L.S2	
R 483 484 704				RD1/4PS391JL		C 218					CEA2R2M35NPL.L	
						C 220					CCSQCH430.150	
R 489 490				RD1/4PS183JL		C 221					CCSQCH090D50	
R 502				RD1/4PS104JL								
R 504				RD1/4PS152JL		C 222					CSZA2R2M25	
R 505				RS1/8S222J		C 224					CEA101M10L.2	
R 506				RS1/8S102J		C 225					CGDYX273M25	
						C 227					CEA100M16L.2	
R 509				RS1/10S473J		C 251 252					CKSVB471K50	
R 510				RD1/4PS331JL								
R 551 552 561 562				RD1/4PS121JL		C 253 254					CEANL4R7M25L	
R 553 554				RD1/2PS010JL		C 257 258 702					CKSYB103K50	
R 555 556 807				RS1/8S472J		C 261 802 804					CEA221M10L.2	
						C 271 272 279 280					CEA010M50L.S2	
R 557 558 808				RS1/8S473J		C 273 274					CQMA683.150	
R 612				RD1/4PM471J								
						C 275 276 479 480					CEAR47M50L.S2	
R 615 616 715 716				RS1/8SOR0J		C 277 278					CKPYX152M16L	
R 706				RD1/4PS101JL		C 281					CEA101M6R3L.S	
						C 282					CEA470M16L.S	
R 708				RD1/4PS184JL		C 283					CEA100M16L.S	
R 713				RS1/10S683J								
R 717 801				RD1/4PM223J		C 451 452 477 478					CEA2R2M50L.S	
R 806				RD1/2PS390JL		C 453					CEA4R7M35L.S	
R 811				RD1/2PS471JL		C 461 462 463 464 465 466 469 470 471 472					CEA2R2M50L.S2	
						C 473 474					CEA221M10L.2	
R 902				RD1/4PS681JL		C 483 553 554 573 574					CEA010M50L.S2	
						C 484 803					CEA010M50L.S	
						C 485 486					CEA220M16L.S	
						C 487 488					CKPYB561K50L	
						C 489 490					CEA3R3M50L.S	
						C 501 505					CKSYB223K50	

# KEH-8282TR/KEH-6262TR

Mark	===== Circuit Symbol & No.	==== Part Name	Part No.
C 502	4.7 $\mu$ F/16V		CCH1005
C 503 504			CCSQCH101150
C 555 556 557 558 575 576 577 578			CEA101M101.2
C 559 560 579			CQMA224,150
C 561 562 581 582			CEA222M101.2
C 565 566	2200 $\mu$ F/16V		CCH1001
C 567 568			CQMA154,150
C 580			CQEA224,163
C 601			CCSCH100050
C 602 806 807 810 811			CKSYF473250
C 603			CEA471M6R31.2
C 606			CKPYF223725L
C 703			CFAR22M501.S
C 704 808			CEA100M251.S
C 805			CSZA010M50L
C 809			CEA4R7M351.S
C 812			CEA100M161.S
C 901			CEA221M161.2

Unit Number :

Unit Name : Keyboard Unit(KEH-8282TR)

Mark	===== Circuit Symbol & No.	==== Part Name	Part No.
* D 901 904	LED		BG3433S
* D 902 903	LED		PR3433S
** IL 901 902 903	Lamp 14V 40mA		CEL1004
	LCD		CWW1055

Unit Number :

Unit Name : Keyboard Unit(KEH-6262TR)

Mark	===== Circuit Symbol & No.	==== Part Name	Part No.
* D 902	LED		PR3433S
** IL 901 902 903	Lamp 14V 40mA		CEL1004
	LCD		CWW1055

Unit Number :

Unit Name : Switch P.C.Board

Mark	===== Circuit Symbol & No.	==== Part Name	Part No.
* D 1 (KEH-8282TR)			F1SR35-100A
** S 1 2	Switch(Mute & Motor)		ESN1001
** S 3	Switch(Tape/Tuner)		MSK-126

Unit Number :

Unit Name : P.C.Board Unit

Mark	===== Circuit Symbol & No.	==== Part Name	Part No.
** S 1	Switch(FWD/REV)		ESH1001

## Miscellaneous Parts List

Mark	===== Circuit Symbol & No.	==== Part Name	Part No.
** HD 1	Head		EPB1001
** M 1	Motor Unit		EXA1013
** SO 1 (KEH-8282TR)	Solenoid		EXP1001

## 17. PACKING METHOD

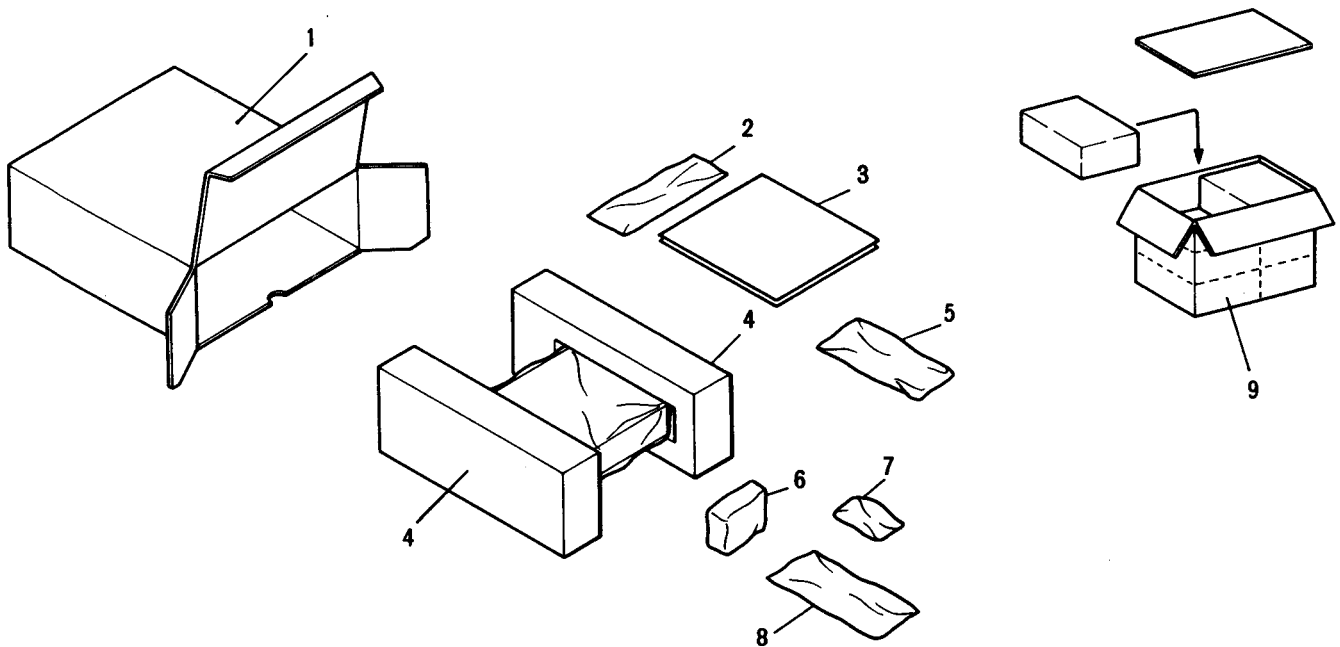


Fig. 15

### ● Parts List

Mark No.	Part No.	Description	Mark No.	Part No.	Description
1	CHG1317	Carton (KEH-8282TR)	5-5-7	PMB50Y160FMC	Screw
	CHG1318	Carton (KEH-6262TR)	6	CNS-962	Cover
2	CXA1786	Panel Kit	7	CXA1836	Knob Assy
2-1	CNG-633	Plate	★ 7-1	CAA-667	Knob
2-2		Panel	★ 7-2	CAA1094	Knob
3	CRD1119	Owner's Manual (English, French)	★ 7-3	CAA1095	Knob
4	CHP1080	Styrofoam	★ 7-4	CAA1096	Knob
5	CEA-550	Accessory Assy	★ 7-5	CAA1097	Knob
5-1	CDE1289	Cord	7-6	CNK-292	Cap
			8	CDE1422	Cord Assy
5-2	CNC-975	Strap	9	CHL1317	Contain Box (KEH-8282TR)
5-3	CNS-722	Cover		CHL1318	Contain Box (KEH-6262TR)
5-4	CNV-769	Washer			
5-5	CEA-215	Screw Kit			
5-5-1	WS40FMC	Washer			
5-5-2	NF40FMC	Nut			
5-5-3	NF50FMC	Nut			
5-5-4	CBA-028	Screw			
5-5-5	CBN-028	Nut			
5-5-6	CND-646	Spacer			